199

(http://www-genome.wi.mit.edu/cgi-bin/contig/rhmapper.pl) to determine the probable chromosomal location. Using this approach, P501S was mapped to the long arm of chromosome 1 at WI-9641 between q32 and q42. This region of chromosome 1 has been linked to prostate cancer susceptibility in hereditary prostate cancer (Smith *et al.*

5   *Science 274*:1371-1374, 1996 and Berthon *et al. Am. J. Hum. Genet. 62*:1416-1424, 1998). These results suggest that P501S may play a role in prostate cancer malignancy.

EXAMPLE 20

REGULATION OF EXPRESSION OF THE PROSTATE-SPECIFIC ANTIGEN P501S

10

Steroid (androgen) hormone modulation is a common treatment modality in prostate cancer. The expression of a number of prostate tissue-specific antigens have previously been demonstrated to respond to androgen. The responsiveness of the prostate-specific antigen P501S to androgen treatment was examined in a tissue culture

15   system as follows.

Cells from the prostate tumor cell line LNCaP were plated at 1.5×10^6 cells/T75 flask (for RNA isolation) or 3×10^5 cells/well of a 6-well plate (for FACS analysis) and grown overnight in RPMI 1640 media containing 10% charcoal-stripped fetal calf serum (BRL Life Technologies, Gaithersburg, MD). Cell culture was

20   continued for an additional 72 hours in RPMI 1640 media containing 10% charcoal-stripped fetal calf serum, with 1 nM of the synthetic androgen Methyltrienolone (R1881; New England Nuclear) added at various time points. Cells were then harvested for RNA isolation and FACS analysis at 0, 1, 2, 4, 8, 16, 24, 28 and 72-hours post androgen addition. FACS analysis was performed using the anti-P501S antibody 10E3-

25   G4-D3 and permeabilized cells.

For Northern analysis, 5-10 micrograms of total RNA was run on a formaldehyde denaturing gel, transferred to Hybond-N nylon membrane (Amersham Pharmacia Biotech, Piscataway, NJ), cross-linked and stained with methylene blue. The filter was then prehybridized with Church's Buffer (250 mM Na_2HPO_4, 70 mM H_3PO_4,

30   1 mM EDTA, 1% SDS, 1% BSA in pH 7.2) at 65 °C for 1 hour. P501S DNA was

labeled with 32P using High Prime random-primed DNA labeling kit (Boehringer Mannheim). Unincorporated label was removed using MicroSpin S300-HR columns (Amersham Pharmacia Biotech). The RNA filter was then hybridized with fresh Church's Buffer containing labeled cDNA overnight, washed with 1X SCP (0.1 M NaCl, 0.03 M $Na_2HPO_4.7H_2O$, 0.001 M Na_2EDTA), 1% sarkosyl (n-lauroylsarcosine) and exposed to X-ray film.

Using both FACS and Northern analysis, P501S message and protein levels were found in increase in response to androgen treatment.

EXAMPLE 20

PREPARATION OF FUSION PROTEINS OF PROSTATE-SPECIFIC ANTIGENS

The example describes the preparation of a fusion protein of the prostate-specific antigen P703P and a truncated form of the known prostate antigen PSA. The truncated form of PSA has a 21 amino acid deletion around the active serine site. The expression construct for the fusion protein also has a restriction site at 3' end, immediately prior to the termination codon, to aid in adding cDNA for additional antigens.

The full-length cDNA for PSA was obtained by RT-PCR from a pool of RNA from human prostate tumor tissues using the primers of SEQ ID NO: 607 and 608, and cloned in the vector pCR-Blunt II-TOPO. The resulting cDNA was employed as a template to make two different fragments of PSA by PCR with two sets of primers (SEQ ID NO: 609 and 610; and SEQ ID NO: 611 and 612). The PCR products having the expected size were used as templates to make truncated forms of PSA by PCR with the primers of SEQ ID NO: 611 and 613, which generated PSA (delta 208-218 in amino acids). The cDNA for the mature form of P703P with a 6X histidine tag at the 5' end, was prepared by PCR with P703P and the primers of SEQ ID NO: 614 and 615. The cDNA for the fusion of P703P with the truncated form of PSA (referred to as FOPP) was then obtained by PCR using the modified P703P cDNA and the truncated form of PSA cDNA as templates and the primers of SEQ ID NO: 614 and 615. The FOPP

cDNA was cloned into the NdeI site and XhoI site of the expression vector pCRX1, and confirmed by DNA sequencing. The determined cDNA sequence for the fusion construct FOPP is provided in SEQ ID NO: 616, with the amino acid sequence being provided in SEQ ID NO: 617.

5   The fusion FOPP was expressed as a single recombinant protein in *E. coli* as follows. The expression plasmid pCRX1FOPP was transformed into the *E. coli* strain BL21-CodonPlus RIL. The transformant was shown to express FOPP protein upon induction with 1 mM IPTG. The culture of the corresponding expression clone was inoculated into 25 ml LB broth containing 50 ug/ml kanamycin and 34 ug/ml

10   chloramphenicol, grown at 37 °C to OD600 of about 1, and stored at 4 °C overnight. The culture was diluted into 1 liter of TB LB containing 50 ug/ml kanamycin and 34 ug/ml chloramphenicol, and grown at 37 °C to OD600 of 0.4. IPTG was added to a final concentration of 1 mM, and the culture was incubated at 30 °C for 3 hours. The cells were pelleted by centrifugation at 5,000 RPM for 8 min. To purify the protein, the

15   cell pellet was suspended in 25 ml of 10 mM Tris-Cl pH 8.0, 2mM PMSF, complete protease inhibitor and 15 ug lysozyme. The cells were lysed at 4 °C for 30 minutes, sonicated several times and the lysate centrifuged for 30 minutes at 10,000 x g. The precipitate, which contained the inclusion body, was washed twice with 10 mM Tris-Cl pH 8.0 and 1% CHAPS. The inclusion body was dissolved in 40 ml of 10 mM Tris-Cl

20   pH 8.0, 100 mM sodium phosphate and 8 M urea. The solution was bound to 8 ml Ni-NTA (Qiagen) for one hour at room temperature. The mixture was poured into a 25 ml column and washed with 50 ml of 10 mM Tris-Cl pH 6.3, 100 mM sodium phosphate, 0.5% DOC and 8M urea. The bound protein was eluted with 350 mM imidazole, 10 mM Tris-Cl pH 8.0, 100 mM sodium phosphate and 8 M urea. The fractions containing

25   FOPP proteins were combined and dialyzed extensively against 10 mM Tris-Cl pH 4.6, aliquoted and stored at - 70 °C.

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EXAMPLE 21

REAL-TIME PCR CHARACTERIZATION OF THE PROSTATE-SPECIFIC ANTIGEN P501S IN PERIPHERAL BLOOD OF PROSTATE CANCER PATIENTS

5　　　　　　　Circulating epithelial cells were isolated from fresh blood of normal individuals and metastatic prostate cancer patients, mRNA isolated and cDNA prepared using real-time PCR procedures. Real-time PCR was performed with the Taqman™ procedure using both gene specific primers and probes to determine the levels of gene expression.

10　　　　　　Epithelial cells were enriched from blood samples using an immunomagnetic bead separation method (Dynal A.S., Oslo, Norway). Isolated cells were lysed and the magnetic beads removed. The lysate was then processed for poly A+ mRNA isolation using magnetic beads coated with Oligo(dT)25. After washing the beads in buffer, bead/poly A+ RNA samples were suspended in 10 mM Tris HCl pH 8.0

15　and subjected to reversed transcription. The resulting cDNA was subjected to real-time PCR using gene specific primers. Beta-actin content was also determined and used for normalization. Samples with P501S copies greater than the mean of the normal samples + 3 standard deviations were considered positive. Real time PCR on blood samples was performed using the Taqman™ procedure but extending to 50 cycles using

20　forward and reverse primers and probes specific for P501S. Of the eight samples tested, 6 were positive for P501S and β-actin signal. The remaining 2 samples had no detectable β-actin or P501S. No P501S signal was observed in the four normal blood samples tested.

25　　　　　　　　　　　　　　　　　EXAMPLE 22

EXPRESSION OF THE PROSTATE-SPECIFIC ANTIGENS P703P AND P501S IN SCID MOUSE-PASSAGED PROSTATE TUMORS

　　　　　　　When considering the effectiveness of antigens in the treatment of

30　prostate cancer, the continued presence of the antigens in tumors during androgen

ablation therapy is important. The presence of the prostate-specific antigens P703P and P501S in prostate tumor samples grown in SCID mice in the presence of testosterone was evaluated as follows.

Two prostate tumors that had metastasized to the bone were removed from patients, implanted into SCID mice and grown in the presence of testosterone. Tumors were evaluated for mRNA expression of P703P, P501S and PSA using quantitative real time PCR with the SYBR green assay method. Expression of P703P and P501S in a prostate tumor was used as a positive control and the absence in normal intestine and normal heart as negative controls. In both cases, the specific mRNA was present in late passage tumors. Since the bone metastases were grown in the presence of testosterone, this implies that the presence of these genes would not be lost during androgen ablation therapy.

EXAMPLE 23

ANTI-P503S MONOCLONAL ANTIBODY INHIBITS TUMOR GROWTH *IN VIVO*

The ability of the anti-P503S monoclonal antibody 20D4 to suppress tumor formation in mice was examined as follows.

Ten SCID mice were injected subcutaneously with HEK293 cells that expressed P503S. Five mice received 150 micrograms of 20D4 intravenously at day 0 (time of tumor cell injection), day 5 and day 9. Tumor size was measured for 50 days. Of the five animals that received no 20D4, three formed detectable tumors after about 2 weeks which continued to enlarge throughout the study. In contrast, none of the five mice that received 20D4 formed tumors. These results demonstrate that the anti-P503S Mab 20D4 displays potent anti-tumor activity *in vivo*.

EXAMPLE 24

CHARACTERIZATION OF A T CELL RECEPTOR CLONE FROM A

P501S-SPECIFIC T CELL CLONE

T cells have a limited lifespan. However, cloning of T cell receptor (TCR) chains and subsequent transfer essentially enables infinite propagation of the T

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cell specificity. Cloning of tumor-antigen TCR chains allows the transfer of the specificity into T cells isolated from patients that share the TCR MHC-restricting allele. Such T cells could then be expanded and used in adoptive transfer settings to introduce the tumor antigen specificity into patients carrying tumors that express the antigen. T

5   cell receptor alpha and beta chains from a CD8 T cell clone specific for the prostate-specific antigen P501S were isolated and sequenced as follows.

Total mRNA from 2 x 10^6 cells from CTL clone 4E5 (described above in Example 12) was isolated using Trizol reagent and cDNA was synthesized. To determine Va and Vb sequences in this clone, a panel of Va and Vb subtype-specific

10   primers was synthesized and used in RT-PCR reactions with cDNA generated from each of the clones. The RT-PCR reactions demonstrated that each of the clones expressed a common Vb sequence that corresponded to the Vb7 subfamily. Futhermore, using cDNA generated from the clone, the Va sequence expressed was determined to be Va6. To clone the full TCR alpha and beta chains from clone 4E5,

15   primers were designed that spanned the initiator and terminator-coding TCR nucleotides. The primers were as follows: TCR Valpha-6 5'(sense): GGATCC---GCCGCCACC—ATGTCACTTTCTAGCCTGCT (SEQ ID NO: 756) BamHI site Kozak TCR alpha sequence TCR alpha 3' (antisense): GTCGAC---TCAGCTGGACCACAGCCGCAG (SEQ ID NO: 757) SalI site TCR alpha constant

20   sequence TCR Vbeta-7. 5'(sense): GGATCC---GCCGCCACC--ATGGGCTGCAGGCTGCTCT (SEQ ID NO: 758) BamHI site Kozak TCR alpha sequence TCR beta 3' (antisense): GTCGAC---TCAGAAATCCTTTCTCTTGAC (SEQ ID NO: 759) SalI site TCR beta constant sequence. Standard 35 cycle RT-PCR reactions were established using cDNA synthesized from the CTL clone and the above

25   primers, employing the proofreading thermostable polymerase PWO (Roche, Nutley, NJ).

The resultant specific bands (approx. 850 bp for alpha and approx. 950 for beta) were ligated into the PCR blunt vector (Invitrogen) and transformed into *E. coli*. *E .coli* transformed with plasmids containing full-length alpha and beta chains

30   were identified, and large scale preparations of the corresponding plasmids were generated. Plasmids containing full-length TCR alpha and beta chains were submitted

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for sequencing. The sequencing reactions demonstrated the cloning of full-length TCR alpha and beta chains with the determined cDNA sequences for the Vb and Va chains being shown in SEQ ID NO: 760 and 761, respectively. The corresponding amino acid sequences are shown in SEQ ID NO: 762 and 763, respectively. The Va sequence was 5   shown by nucleotide sequence alignment to be 99% identical (347/348) to Va6.2, and the Vb to be 99% identical to Vb7 (336/338).

        From the foregoing it will be appreciated that, although specific embodiments of the invention have been described herein for purposes of illustration, 10   various modifications may be made without deviating from the spirit and scope of the invention. Accordingly, the invention is not limited except as by the appended claims.

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CLAIMS

What is Claimed:

1.   An isolated polynucleotide comprising a sequence selected from the group consisting of:

(a)   sequences provided in SEQ ID NO: 1-111, 115-171, 173-175, 177, 179-305, 307-315, 326, 328, 330, 332-335, 340-375, 381, 382 and 384-476, 524, 526, 530, 531, 533, 535, 536, 552, 569-572, 587, 591, 593-606, 618-626, 630, 631, 634, 636, 639-655, 674, 680, 681, 711, 713, 716, 720-722, 735, 737-739, 751, 753, 764, 765, 773-776 and 786-788;

(b)   complements of the sequences provided in SEQ ID NO: 1-111, 115-171, 173-175, 177, 179-305, 307-315, 326, 328, 330, 332-335, 340-375, 381, 382 and 384-476, 524, 526, 530, 531, 533, 535, 536, 552, 569-572, 587, 591, 593-606, 618-626, 630, 631, 634, 636, 639-655, 674, 680, 681, 711, 713, 716, 720-722, 735, 737-739, 751, 753, 764, 765, 773-776 and 786-788;

(c)   sequences consisting of at least 20 contiguous residues of a sequence provided in SEQ ID NO: 1-111, 115-171, 173-175, 177, 179-305, 307-315, 326, 328, 330, 332-335, 340-375, 381, 382 and 384-476, 524, 526, 530, 531, 533, 535, 536, 552, 569-572, 587, 591, 593-606, 618-626, 630, 631, 634, 636, 639-655, 674, 680, 681, 711, 713, 716, 720-722, 735, 737-739, 751, 753, 764, 765, 773-776 and 786-788;

(d)   sequences that hybridize to a sequence provided in SEQ ID NO: 1-111, 115-171, 173-175, 177, 179-305, 307-315, 326, 328, 330, 332-335, 340-375, 381, 382 and 384-476, 524, 526, 530, 531, 533, 535, 536, 552, 569-572, 587, 591, 593-606, 618-626, 630, 631, 634, 636, 639-655, 674, 680, 681, 711, 713, 716, 720-722, 735, 737-739, 751, 753, 764, 765, 773-776 and 786-788 under moderately stringent conditions;

(e)   sequences having at least 75% identity to a sequence of SEQ ID NO: 1-111, 115-171, 173-175, 177, 179-305, 307-315, 326, 328, 330, 332-335, 340-

375, 381, 382 and 384-476, 524, 526, 530, 531, 533, 535, 536, 552, 569-572, 587, 591, 593-606, 618-626, 630, 631, 634, 636, 639-655, 674, 680, 681, 711, 713, 716, 720-722, 735, 737-739, 751, 753, 764, 765, 773-776 and 786-788;

(f)   sequences having at least 90% identity to a sequence of SEQ ID NO: 1-111, 115-171, 173-175, 177, 179-305, 307-315, 326, 328, 330, 332-335, 340-375, 381, 382 and 384-476, 524, 526, 530, 531, 533, 535, 536, 552, 569-572, 587, 591, 593-606, 618-626, 630, 631, 634, 636, 639-655, 674, 680, 681, 711, 713, 716, 720-722, 735, 737-739, 751, 753, 764, 765, 773-776 and 786-788; and

(g)   degenerate variants of a sequence provided in SEQ ID NO: 1-111, 115-171, 173-175, 177, 179-305, 307-315, 326, 328, 330, 332-335, 340-375, 381, 382 and 384-476, 524, 526, 530, 531, 533, 535, 536, 552, 569-572, 587, 591, 593-606, 618-626, 630, 631, 634, 636, 639-655, 674, 680, 681, 711, 713, 716, 720-722, 735, 737-739, 751, 753, 764, 765, 773-776 and 786-788.

2.   An isolated polypeptide comprising an amino acid sequence selected from the group consisting of:

(a)   sequences recited in SEQ ID NO: 112-114, 172, 176, 178, 327, 329, 331, 336, 339, 376-380, 383, 477-483, 496, 504, 505, 519, 520, 522, 525, 527, 532, 534, 537-551, 553-568, 573-586, 588-590, 592, 627-629, 632, 633, 635, 637, 638, 656-671, 675, 683, 684, 710, 712, 714, 715, 717-719, 723-734, 736, 740-750, 752, 754, 755, 766-772, 777-785 and 789-791;

(b)   sequences having at least 70% identity to a sequence of SEQ ID NO: 112-114, 172, 176, 178, 327, 329, 331, 336, 339, 376-380, 383, 477-483, 496, 504, 505, 519, 520, 522, 525, 527, 532, 534, 537-551, 553-568, 573-586, 588-590, 592, 627-629, 632, 633, 635, 637, 638, 656-671, 675, 683, 684, 710, 712, 714, 715, 717-719, 723-734, 736, 740-750, 752, 754, 755, 766-772, 777-785 and 789-791;

(c)   sequences having at least 90% identity to a sequence of SEQ ID NO: 112-114, 172, 176, 178, 327, 329, 331, 336, 339, 376-380, 383, 477-483, 496, 504, 505, 519, 520, 522, 525, 527, 532, 534, 537-551, 553-568, 573-586, 588-590, 592, 627-

629, 632, 633, 635, 637, 638, 656-671, 675, 683, 684, 710, 712, 714, 715, 717-719, 723-734, 736, 740-750, 752, 754, 755, 766-772, 777-785 and 789-791;

     (d)   sequences encoded by a polynucleotide of claim 1;

     (e)   sequences having at least 70% identity to a sequence encoded by a polynucleotide of claim 1; and

     (f)   sequences having at least 90% identity to a sequence encoded by a polynucleotide of claim 1.

     3.   An expression vector comprising a polynucleotide of claim 1 operably linked to an expression control sequence.

     4.   A host cell transformed or transfected with an expression vector according to claim 3.

     5.   An isolated antibody, or antigen-binding fragment thereof, that specifically binds to a polypeptide of claim 2.

     6.   A method for detecting the presence of a cancer in a patient, comprising the steps of:

     (a)   obtaining a biological sample from the patient;

     (b)   contacting the biological sample with a binding agent that binds to a polypeptide of claim 2;

     (c)   detecting in the sample an amount of polypeptide that binds to the binding agent; and

     (d)   comparing the amount of polypeptide to a predetermined cut-off value and therefrom determining the presence of a cancer in the patient.

     7.   A fusion protein comprising at least one polypeptide according to claim 2.

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8.   The fusion protein of claim 7, wherein the fusion protein comprises a sequence selected from the group consisting of:

(a)   sequences provided in SEQ ID NO: 682, 692, 695, 699, 703 and 709; and

(b)   sequences encoded by SEQ ID NO: 679, 691, 696, 700, 704 and 708.

9.   An oligonucleotide that hybridizes to a sequence recited in SEQ ID NO: 1-111, 115-171, 173-175, 177, 179-305, 307-315, 326, 328, 330, 332-335, 340-375, 381, 382 and 384-476, 524, 526, 530, 531, 533, 535, 536, 552, 569-572, 587, 591, 593-606, 618-626, 630, 631, 634, 636, 639-655, 674, 680, 681, 711, 713, 716, 720-722, 735, 737-739, 751, 753, 764, 765, 773-776 or 786-788 under moderately stringent conditions.

10.   A method for stimulating and/or expanding T cells specific for a tumor protein, comprising contacting T cells with at least one component selected from the group consisting of:

(a)   polypeptides according to claim 2;

(b)   polynucleotides according to claim 1; and

(c)   antigen-presenting cells that express a polypeptide according to claim 1,

under conditions and for a time sufficient to permit the stimulation and/or expansion of T cells.

11.   An isolated T cell population, comprising T cells prepared according to the method of claim 10.

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12.   A composition comprising a first component selected from the group consisting of physiologically acceptable carriers and immunostimulants, and a second component selected from the group consisting of:

(a)   polypeptides according to claim 2;

(b)   polynucleotides according to claim 1;

(c)   antibodies according to claim 5;

(d)   fusion proteins according to claim 7;

(e)   T cell populations according to claim 11; and

(f)   antigen presenting cells that express a polypeptide according to claim 2.

13.   A method for stimulating an immune response in a patient, comprising administering to the patient a composition of claim 12.

14.   A method for the treatment of a cancer in a patient, comprising administering to the patient a composition of claim 12.

15.   A method for determining the presence of a cancer in a patient, comprising the steps of:

(a)   obtaining a biological sample from the patient;

(b)   contacting the biological sample with an oligonucleotide according to claim 9;

(c)   detecting in the sample an amount of a polynucleotide that hybridizes to the oligonucleotide; and

(d)   compare the amount of polynucleotide that hybridizes to the oligonucleotide to a predetermined cut-off value, and therefrom determining the presence of the cancer in the patient.

16.   A diagnostic kit comprising at least one oligonucleotide according to claim 9.

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17.   A diagnostic kit comprising at least one antibody according to claim 5 and a detection reagent, wherein the detection reagent comprises a reporter group.

18.   A method for inhibiting the development of a cancer in a patient, comprising the steps of:

(a)   incubating CD4+ and/or CD8+ T cells isolated from a patient with at least one component selected from the group consisting of: (i) polypeptides according to claim 2; (ii) polynucleotides according to claim 1; and (iii) antigen presenting cells that express a polypeptide of claim 2, such that T cell proliferate; and

(b)   administering to the patient an effective amount of the proliferated T cells,

thereby inhibiting the development of a cancer in the patient.
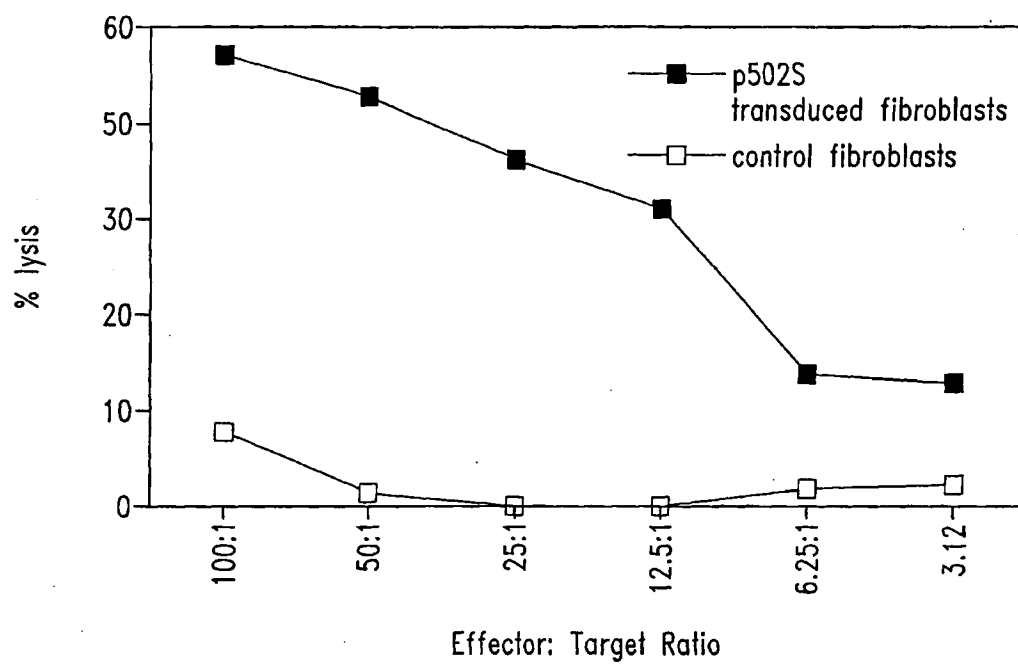
Fig. 1
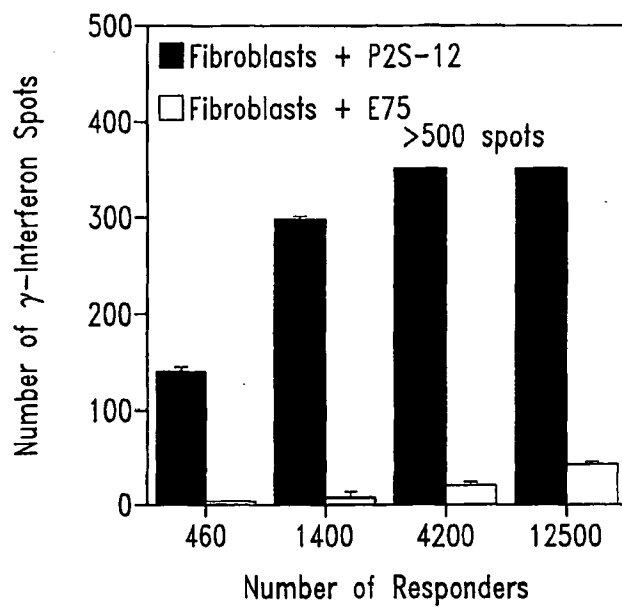
Fig. 2A
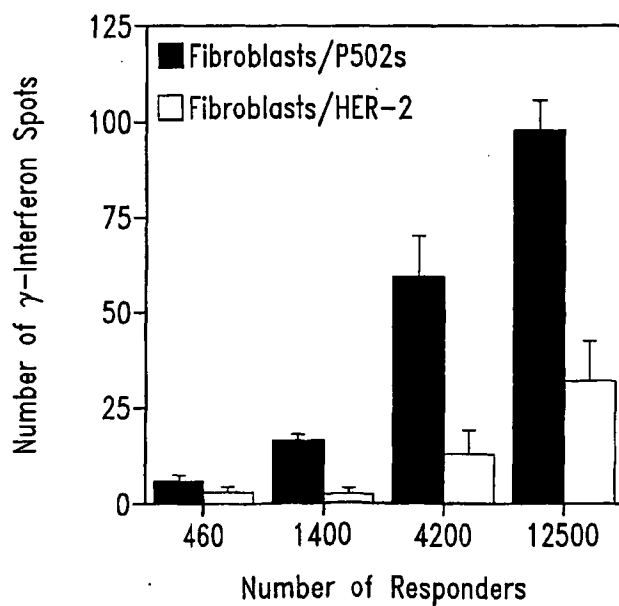
Fig. 2B
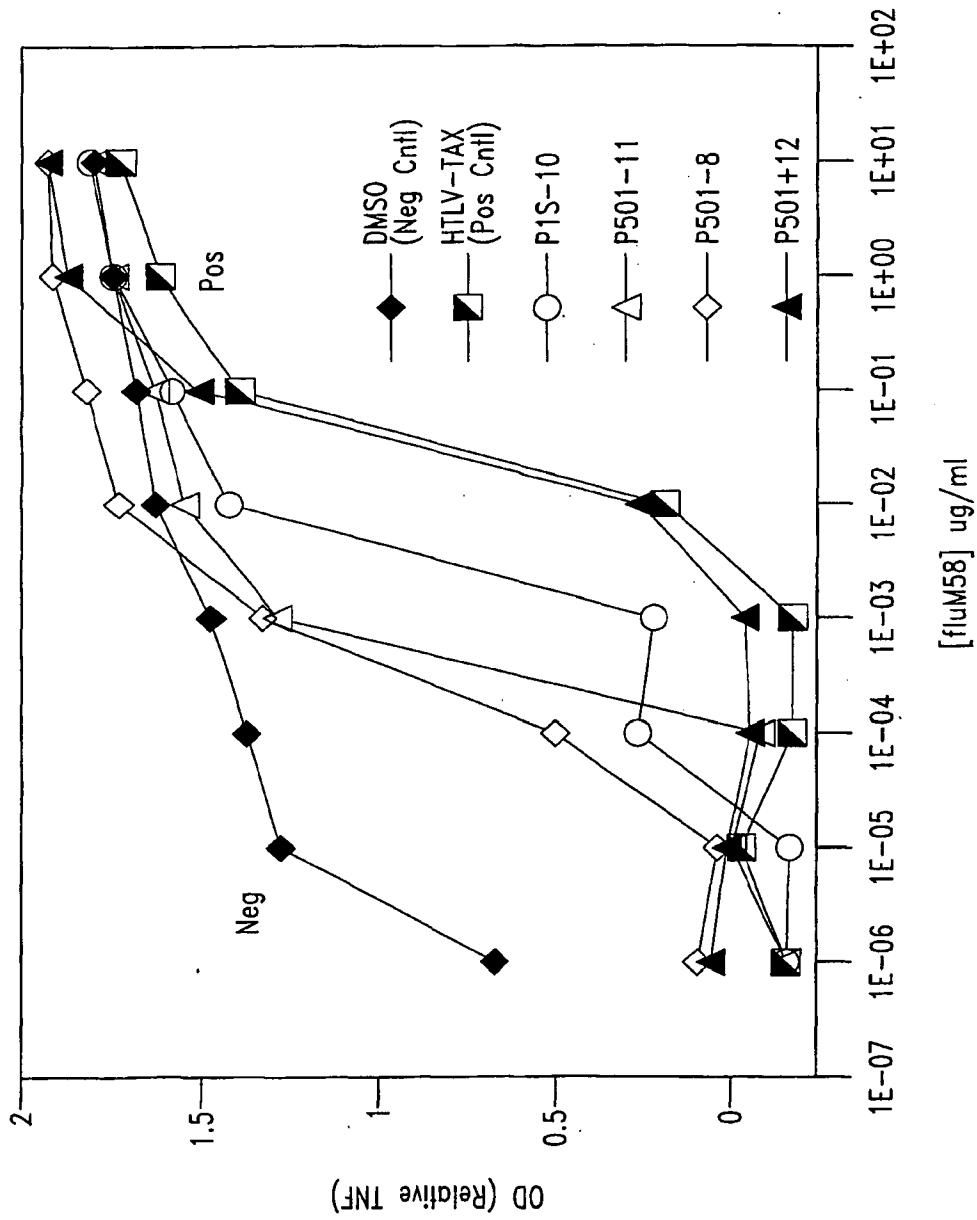
Fig. 3
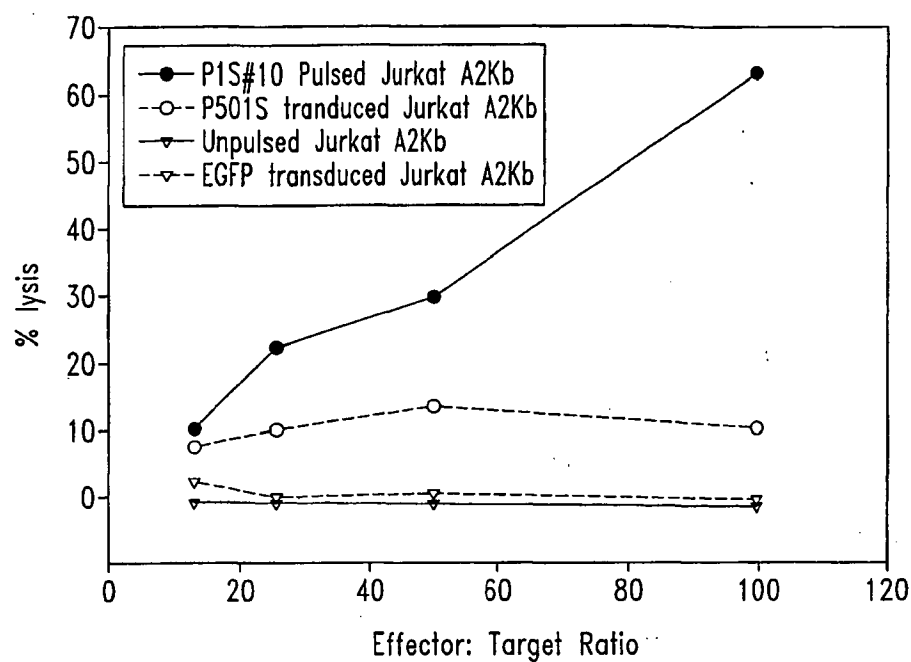
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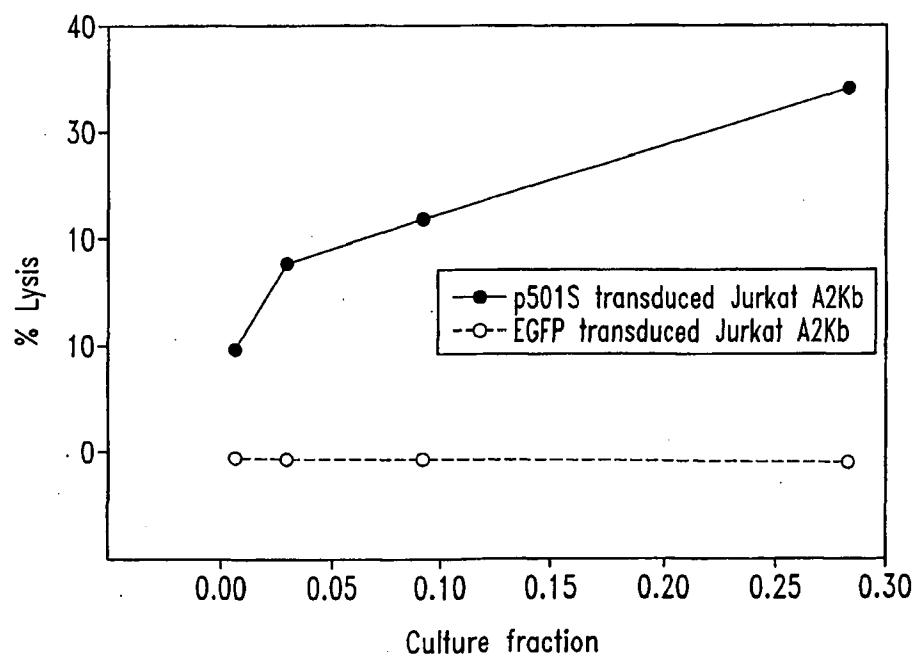
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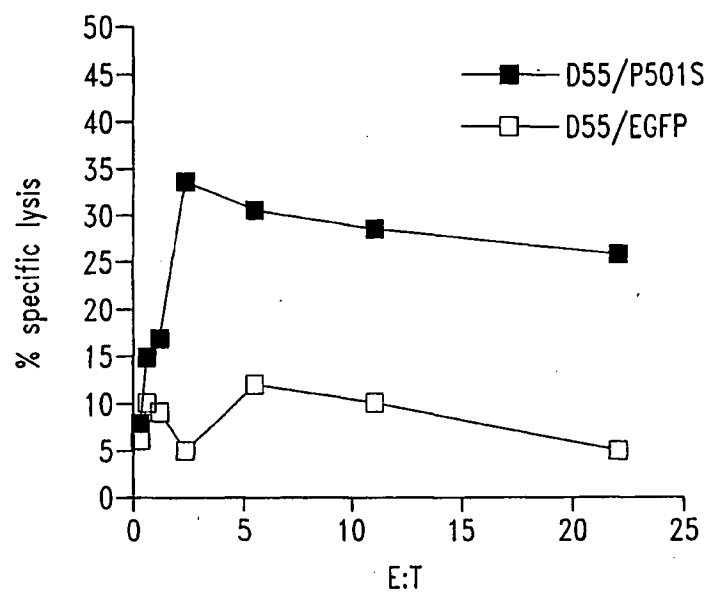
Fig. 6A
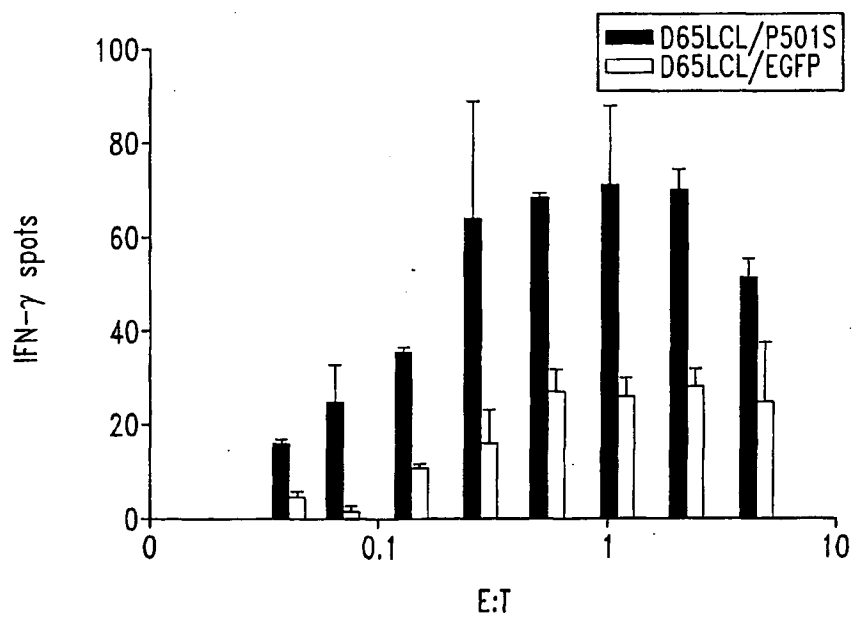
Fig. 6B

Expression of P501S
by the Baculovirus Expression System
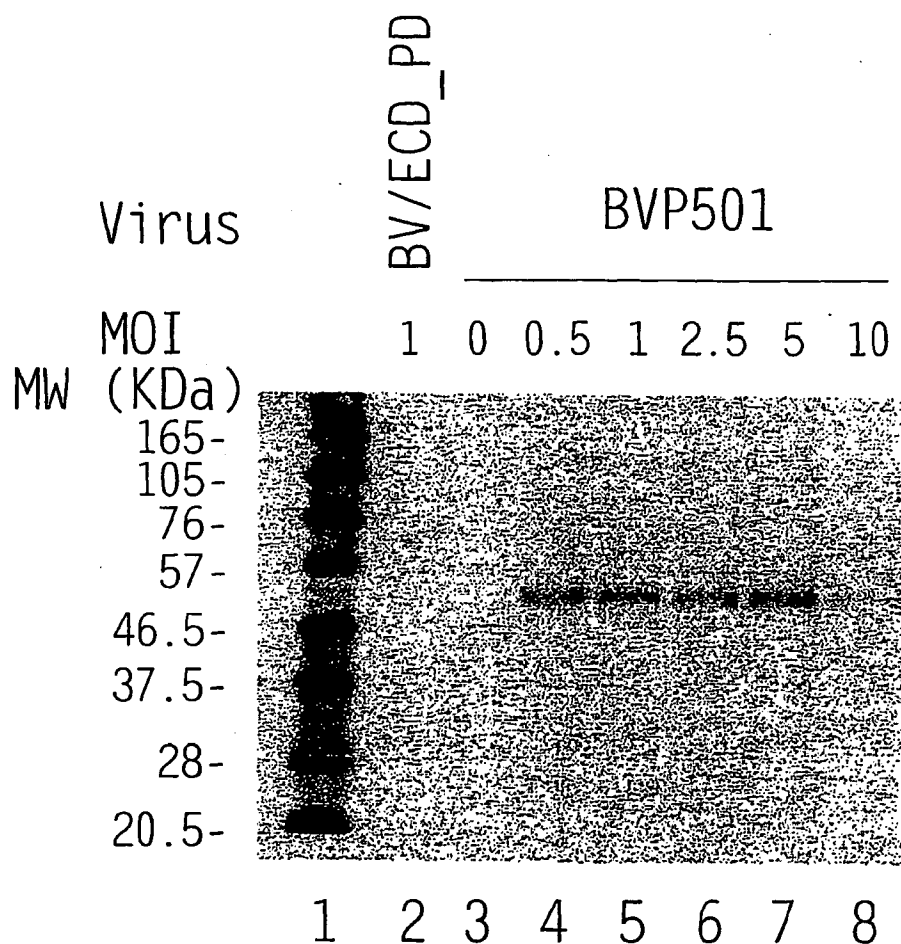
C 6 million high 5 cells in 6-well plate were infected with an unrelated
control virus BV/ECD_PD (lane2), without virus (lane3), or with
recombinant baculovirus for P501 at different MOIs (lane 4-8). Cell
lysates were run on SDS-PAGE under the reducing conditions and analyzed
by Western blot with a monoclonal antibody against P501S
(P501S-10E3-G4D3). Lane 1 is the biotinylated protein molecular weight
marker (BioLabs).

Fig. 7

FIGURE 8. Mapping of the epitope recognized by
10E3-G4-D3
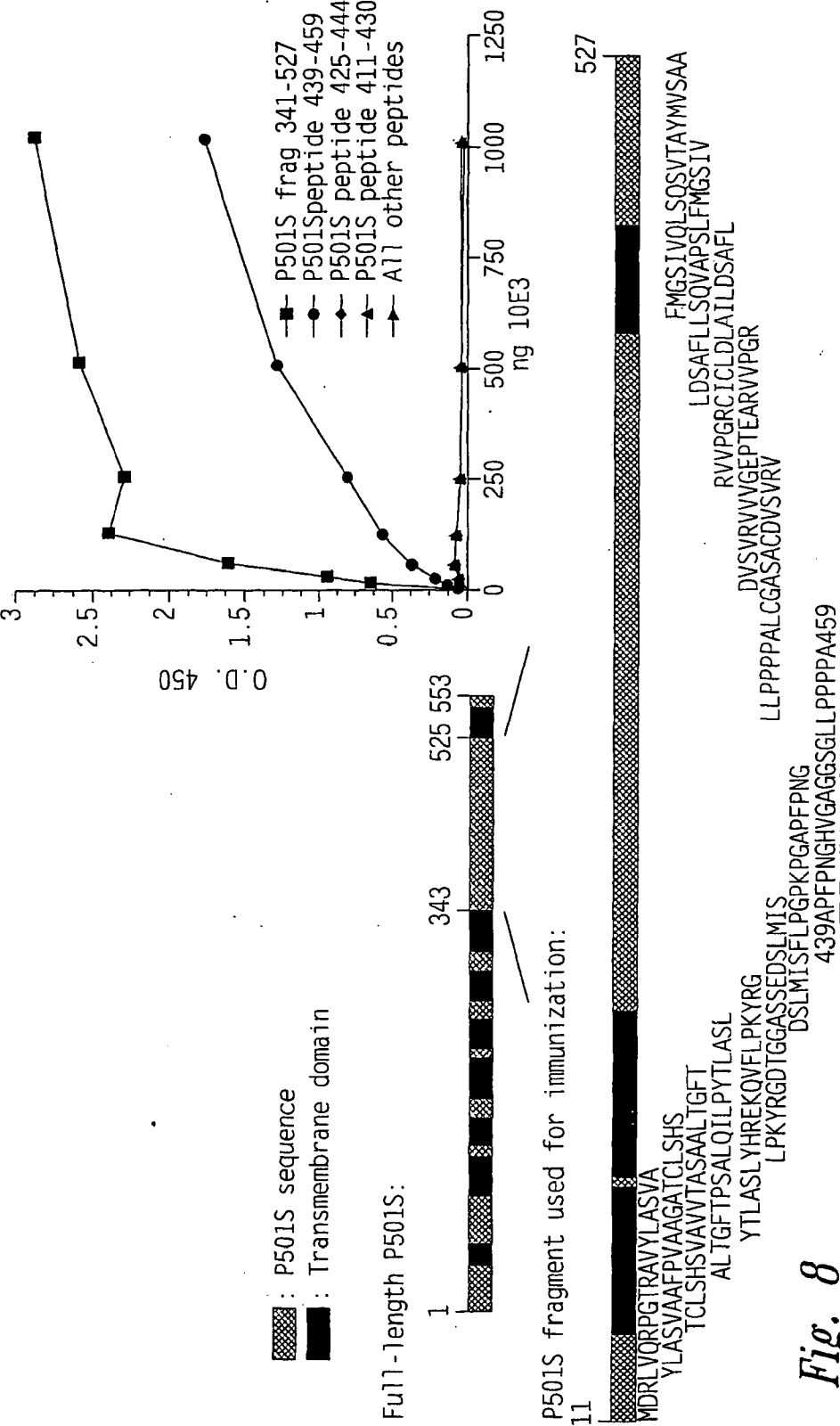
Fig. 8

Schematic of P501S with predicted
transmembrane, cytoplasmic, and extracellular regions

MVQRLWVSRLLRHRK AQLLLVNLLTFGLEVCLAAGIT YVPPLLLEVGVEEKFM
TMVLGIGPVLGLVCYPLLGSAS

DHWRGRYGRRRP FIWALSLGILLSLFLIPRAGWL AGLLCPDPRPLE LALLILGVGLLDFCGQVCFTPL

EALLSDLFRDPDHCRQ AYSVYAFMISLGGCLGYLLPAI DWDTSALAPYLGTQEE

CLFGLLTLIFLTCVAATLLV *AEEAALGPTEPAEGLSAPSLSPHCCPCRARLAFRNLGALLPRL*

HQLCCRMPRTLRR LFVAELCSWMALMTFTLFYTDF **VGEGLYQGVPRAEPGTEARRHYDEGVR**

MGSLGLFLQCAISLVFSLVM *DRLVQRFGTRAVYLAS* VAAFPVAAGATCLSHSVAVVTA SAA

LTGFTFSALQILPYTLASLY *HREKQVFLPKYRGDTGGASSEDSLMTSFLPGPKPGAPFPNGHVGAGGSGL*

LPPPPALCGASACDVSVRVVVGEPTEARVVPGRG ICLDLAILDSAFLLSQVAPSLF **MGSIVQLSQS**

VTAYMVSAAGLGLVAIYFAT *QVVFDKSDLAKYSA*

Underlined sequence: Predicted transmembrane domain; **Bold sequence**:
Predicted extracellular domain; *Italic sequence*: Predicted intracellular
domain. Sequence in bold/underlined: used generate polyclonal rabbit
serum

Localization of domains predicted using HMMTOP (G.E. Tusnady an I. Simon
(1998) Principles Governing Amino Acid Composition of Integral Membrane
Proteins: Applications to topology Prediction.J.Mol Biol. 283, 489-506.

Fig. 9

Genomic Map of (5) Corixa Candidate Genes

Fig. 10

Elisa assay of rabbit polyclonal
antibody specificity

P501S 306-320 RAEPGTEARRNYDEG(cg)
P501S 296-320: (gc)YGEGLYQGVPRAEPGTEARRHYDEG
P501S 439-459
P501S FRAGMENT 343-525
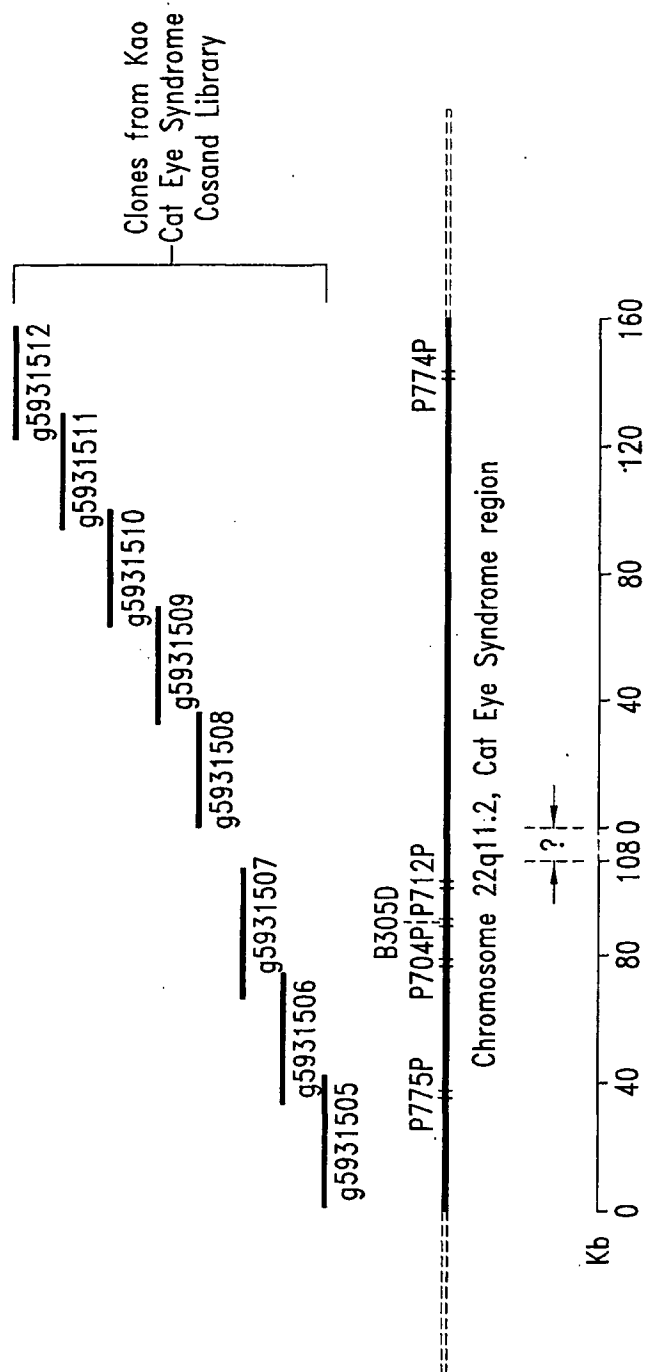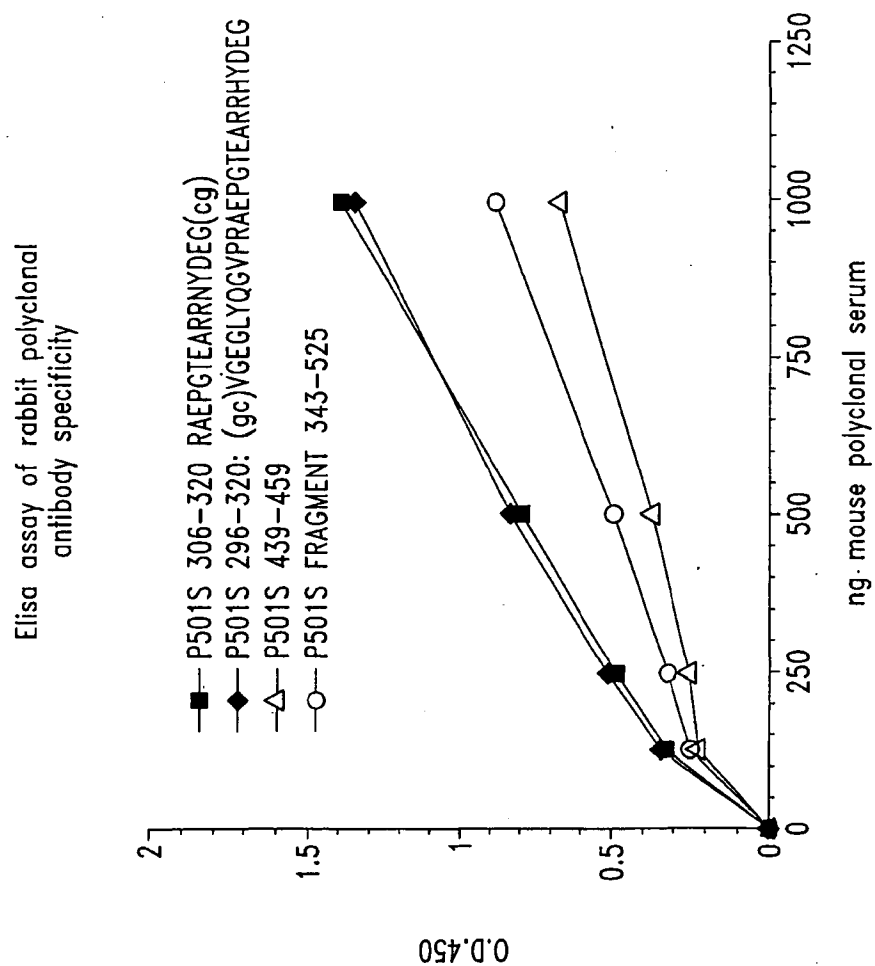
Fig. 11

SEQUENCE LISTING

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      Dillon, Davin C.
      Mitcham, Jennifer L.
      Harlocker, Susan L.
      Jiang, Yuqui
      Reed, Steven G.
      Kalos, Michael D.
      Fanger, Gary R.
      Retter, Marc W.
      Stolk, John A.
      Day, Craig H.
      Skeiky, Yasir A.W.
      Wang, Aijun
      Meagher, Medeleine Joy
      Vanderbrugge, Didier
      Dewerchin, Marianne
      Dehottay, Ph.
      de Rop, Philippe

<120> COMPOSITIONS AND METHODS FOR THE THERAPY AND
      DIAGNOSIS OF PROSTATE CANCER

<130> 210121.42722PC

<140> PCT
<141> 2001-01-16

<160> 792

<170> FastSEQ for Windows Version 3.0

<210> 1
<211> 814
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(814)
<223> n = A,T,C or G

<400> 1
tttttttttt tttttcacag tataacagct ctttatttct gtgagttcta ctaggaaatc   60
atcaaatctg agggttgtct ggaggacttc aatacacctc cccccatagt gaatcagctt   120
ccagggggtc cagtccctct ccttacttca tccccatccc atgccaaagg aagaccctcc   180
ctccttggct cacagccttc tctaggcttc ccagtgcctc caggacagag tgggttatgt   240
tttcagctcc atccttgctg tgagtgtctg gtgcgttgtg cctccagctt ctgctcagtg   300
cttcatggac agtgtccagc acatgtcact ctccactctc tcagtgtgga tccactagtt   360
ctagagcggc cgccaccgcg gtggagctcc agcttttgtt ccctttagtg agggttaatt   420
gcgcgcttgg cgtaatcatg gtcataactg tttcctgtgt gaaattgtta tccgctcaca   480
attccacaca acatacgagc cggaagcata aagtgtaaag cctggggtgc ctaatgagtg   540
anctaactca cattaattgc gttgcgctca ctgnccgctt ccagtcngg aaaactgtcg   600
tgccagctgc attaatgaat cggccaacgc ncggggaaaa gcggtttgcg ttttggggc   660

2

```
tcttccgctt ctcgctcact nantcctgcg ctcggtcntt cggctgcggg gaacggtatc      720
actcctcaaa ggnggtatta cggttatccn naaatcnggg gatacccngg aaaaaanttt      780
aacaaaaggg cancaaaggg cngaaacgta aaaa                                  814
```

        <210> 2
        <211> 816
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(816)
        <223> n = A,T,C or G

        <400> 2
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acagaaatgt tggatggtgg agcacctttc tatacgactt acaggacagc agatggggaa       60
ttcatggctg ttggagcaat agaaccccag ttctacgagc tgctgatcaa aggacttgga      120
ctaaagtctg atgaacttcc caatcagatg agcatggatg attggccaga aatgaagaag      180
aagtttgcag atgtatttgc aaagaagacg aaggcagagt ggtgtcaaat ctttgacggc      240
acagatgcct gtgtgactcc ggttctgact tttgaggagg ttgttcatca tgatcacaac      300
aaggaacggg gctcgtttat caccagtgag gagcaggacg tgagcccccg ccctgcacct      360
ctgctgttaa acaccccagc catcccttct ttcaaaaggg atccactagt tctagaagcg      420
gccgccaccg cggtggagct ccagcttttg ttccctttag tgagggttaa ttgcgcgctt      480
ggcgtaatca tggtcatagc tgtttcctgt gtgaaattgt tatccgctca caattccccc      540
aacatacgag ccggaacata aagtgttaag cctggggtgc ctaatgantg agctaactcn      600
cattaattgc gttgcgctca ctgcccgctt ccagtcgggg aaaactgtcg tgccactgcn      660
ttantgaatc ngccaccccc cgggaaaagg cggttgcntt ttgggcctct tccgctttcc      720
tcgctcattg atcctngcnc ccggtcttcg gctgcggnga acggttcact cctcaaaggc      780
ggtntnccgg ttatccccaa acngggggata cccnga                              816
```

        <210> 3
        <211> 773
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(773)
        <223> n = A,T,C or G

        <400> 3
```
cttttgaaag aagggatggc tggggtgttt aacagcagag gtgcagggcg ggggctcacg       60
tcctgctcct cactggtgat aaacgagccc cgttccttgt tgtgatcatg atgaacaacc      120
tcctcaaaag tcagaaccgg agtcacacag gcatctgtgc cgtcaaagat ttgacaccac      180
tctgccttcg tcttctttgc aaatacatct gcaaacttct tcttcatttc tggccaatca      240
tccatgctca tctgattggg aagttcatca gactttagtc canntccttt gatcagcagc      300
tcgtagaact ggggttctat tgctccaaca gccatgaatt ccccatctgc tgtcctgtaa      360
gtcgtataga aaggtgctcc accatccaac atgttctgtc ctcgaggggg ggcccggtac      420
ccaattcgcc ctatantgag tcgtattacg cgcgctcact ggccgtcgtt ttacaacgtc      480
gtgactggga aaaccctggg cgttaccaac ttaatcgcct tgcagcacat ccccctttcg      540
ccagctgggc gtaatancga aaaggcccgc accgatcgcc cttccaacag ttgcgcacct      600
gaatgggnaa atgggacccc cctgttaccg cgcattnaac ccccgcnggg tttngttgtt      660
accccccacnt nnaccgctta cactttgcca cgcgccttanc gcccgctccc tttcnccttt      720
cttcccttcc tttcncnccn ctttccccccg gggtttcccc cntcaaaccc cna            773
```

        <210> 4
        <211> 828
        <212> DNA

<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(828)
<223> n = A,T,C or G

<400> 4

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cctcctgagt cctactgacc tgtgctttct ggtgtggagt ccagggctgc taggaaaagg     60
aatgggcaga cacaggtgta tgccaatgtt tctgaaatgg gtataatttc gtcctctcct    120
tcggaacact ggctgtctct gaagacttct cgctcagttt cagtgaggac acacacaaag    180
acgtgggtga ccatgttgtt tgtggggtgc agagatggga ggggtggggc ccaccctgga    240
agagtggaca gtgacacaag gtggacactc tctacagatc actgaggata agctggagcc    300
acaatgcatg aggcacacac acagcaagga tgacnctgta aacatagccc acgctgtcct    360
gngggcactg ggaagcctan atnaggccgt gagcanaaag aaggggagga tccactagtt    420
ctanagcggc cgccaccgcg gtgganctcc ancttttgtt ccctttagtg agggttaatt    480
gcgcgcttgg cntaatcatg gtcatanctn tttcctgtgt gaaattgtta tccgctcaca    540
attccacaca acatacganc cggaaacata aantgtaaac ctggggtgcc taatgantga    600
ctaactcaca ttaattgcgt tgcgctcact gcccgctttc caatcnggaa acctgtcttg    660
ccncttgcat tnatgaatcn gccaaccccc ggggaaaagc gtttgcgttt tgggcgctct    720
tccgcttcct cnctcantta ntccctncnc tcggtcattc cggctgcngc aaaccggttc    780
accncctcca aagggggtat tccggtttcc ccnaatccgg gganancc               828
```

<210> 5
<211> 834
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(834)
<223> n = A,T,C or G

<400> 5

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tttttttttt ttttactga tagatggaat ttattaagct tttcacatgt gatagcacat     60
agttttaatt gcatccaaag tactaacaaa aactctagca atcaagaatg gcagcatgtt    120
attttataac aatcaacacc tgtggctttt aaaatttggt tttcataaga taatttatac    180
tgaagtaaat ctagccatgc ttttaaaaaa tgctttaggt cactccaagc ttggcagtta    240
acatttggca taaacaataa taaaacaatc acaatttaat aaataacaaa tacaacattg    300
taggccataa tcatatacag tataaggaaa aggtggtagt gttgagtaag cagttattag    360
aatagaatac cttggcctct atgcaaatat gtctagacac tttgattcac tcagccctga    420
cattcagttt tcaaagtagg agacaggttc tacagtatca ttttacagtt tccaacacat    480
tgaaaacaag tagaaaatga tgagttgatt tttattaatg cattacatcc tcaagagtta    540
tcaccaaccc ctcagttata aaaaattttc aagttatatt agtcatataa cttggtgtgc    600
ttattttaaa ttagtgctaa atggattaag tgaagacaac aatggtcccc taatgtgatt    660
gatattggtc attttacca gcttctaaat ctnaactttc aggctttga actggaacat    720
tgnatnacag tgttccanag ttncaaccta ctggaacatt acagtgtgct tgattcaaaa    780
tgttattttg ttaaaaatta aattttaacc tggtggaaaa ataatttgaa atna          834
```

<210> 6
<211> 818
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(818)
<223> n = A,T,C or G

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        <400> 6
        ttttttttttt ttttttttttt aagaccctca tcaatagatg gagacataca gaaatagtca    60
        aaccacatct acaaaatgcc agtatcaggc ggcggcttcg aagccaaagt gatgtttgga   120
        tgtaaagtga aatattagtt ggcggatgaa gcagatagtg aggaaagttg agccaataat   180
        gacgtgaagt ccgtggaagc ctgtggctac aaaaaatgtt gagccgtaga tgccgtcgga   240
        aatggtgaag ggagactcga agtactctga ggcttgtagg agggtaaaat agagacccag   300
        taaaattgta ataagcagtg cttgaattat ttggtttcgg ttgtttttcta ttagactatg   360
        gtgagctcag gtgattgata ctcctgatgc gagtaatacg gatgtgttta ggagtgggac   420
        ttctaggggga tttagcgggg tgatgcctgt tgggggccag tgccctccta gttgggggggt   480
        aggggctagg ctggagtggt aaaaggctca gaaaaatcct gcgaagaaaa aaacttctga   540
        ggtaataaat aggattatcc cgtatcgaag gccttttttgg acaggtggtg tgtggtggcc   600
        ttggtatgtg ctttctcgtg ttacatcgcg ccatcattgg tatatggtta gtgtgttggg   660
        ttantanggc ctantatgaa gaactttttgg antggaatta aatcaatngc ttggccggaa   720
        gtcattanga nggctnaaaa ggccctgtta ngggtctggg ctnggttttta cccnacccat   780
        ggaatncncc ccccggacna ntgnatccct attcttaa                            818


        <210> 7
        <211> 817
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(817)
        <223> n = A,T,C or G

        <400> 7
        ttttttttttt ttttttttttt tggctctaga gggggtagag ggggtgctat agggtaaata    60
        cgggccctat ttcaaagatt tttaggggaa ttaattctag gacgatgggt atgaaactgt   120
        ggtttgctcc acagatttca gagcattgac cgtagtatac ccccggtcgt gtagcggtga   180
        aagtggtttg gtttagacgt ccgggaattg catctgtttt taagcctaat gtggggacag   240
        ctcatgagtg caagacgtct tgtgatgtaa ttattatacn aatgggggct tcaatcggga   300
        gtactactcg attgtcaacg tcaaggagtc gcaggtcgcc tggttctagg aataatgggg   360
        gaagtatgta ggaattgaag attaatccgc cgtagtcggt gttctcctag gttcaatacc   420
        attggtggcc aattgatttg atggtaaggg gagggatcgt tgaactcgtc tgttatgtaa   480
        aggatnccctt ngggatggga aggcnatnaa ggactangga tnaatggcgg gcangatatt   540
        tcaaacngtc tctanttcct gaaacgtctg aaatgttaat aanaattaan tttngttatt   600
        gaatnttnng gaaaagggct tacaggacta gaaaccaaat angaaaanta atnntaangg   660
        cnttatcntn aaaggtnata accnctccta tnatcccacc caatngnatt ccccacncnn   720
        acnattggat nccccanttc canaaanggc cnccccccgg tgnannccnc cttttgttcc   780
        cttnantgan ggttattcnc ccctngcntt atcancc                           817


        <210> 8
        <211> 799
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(799)
        <223> n = A,T,C or G

        <400> 8
        catttccggg tttactttct aaggaaagcc gagcggaagc tgctaacgtg ggaatcggtg    60
        cataaggaga actttctgct ggcacgcgct agggacaagc gggagagcga ctccgagcgt   120
        ctgaagcgca cgtcccagaa ggtggacttg gcactgaaac agctgggaca catccgcgag   180
        tacgaacagc gcctgaaagt gctggagcgg gaggtccagc agtgtagccg cgtcctgggg   240
```

```
tgggtggccg angcctganc cgctctgcct tgctgccccc angtgggccg ccaccccctg    300
acctgcctgg gtccaaacac tgagccctgc tggcggactt caagganaac ccccacangg    360
ggattttgct cctanantaa ggctcatctg ggcctcggcc cccccacctg gttggccttg    420
tctttgangt gagccccatg tccatctggg ccactgtcng gaccaccttt ngggagtgtt    480
ctccttacaa ccacannatg cccggctcct cccggaaacc antcccancc tgngaaggat    540
caagncctgn atccactnnt nctanaaccg gccnccnccg cngtggaacc cnccttntgt    600
tcctttttcnt tnagggttaa tnncgccttg gccttnccan ngtcctncnc ntttttccnnt   660
gttnaaattg ttangcnccc nccnntcccn cnncnncnan cccgacccnn annttnnann    720
ncctgggggt nccnncngat tgacccnncc ncccntnant tgcnttnggg nncnntgccc    780
ctttccctct ngggannncg                                               799
```

    <210> 9
    <211> 801
    <212> DNA
    <213> Homo sapien

    <220>
    <221> misc_feature
    <222> (1)...(801)
    <223> n = A,T,C or G

    <400> 9

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acgccttgat cctcccaggc tgggactggt tctgggagga gccgggcatg ctgtggtttg    60
taangatgac actcccaaag gtggtcctga cagtggccca gatggacatg gggctcacct    120
caaggacaag gccaccaggt gcggggggccg aagcccacat gatccttact ctatgagcaa   180
aatcccctgt gggggcttct ccttgaagtc cgccancagg gctcagtctt tggacccang    240
caggtcatgg ggttgtngnc caactggggg ccncaacgca aaanggcnca gggcctcngn    300
cacccatccc angacgcggc tacactnctg gacctcccnc tccaccactt tcatgcgctg    360
ttcntacccg cgnatntgtc ccanctgttt cngtgccnac tccancttct nggacgtgcg    420
ctacatacgc ccggantcnc nctcccgctt tgtccctatc cacgtnccan caacaaattt    480
cnccntantg caccnattcc cacntttnnc agntttccnc nncgngcttc cttntaaaag    540
ggttgancccc cggaaaaatnc cccaaagggg ggggccngg tacccaactn ccccctnata    600
gctgaantcc ccatnaccnn gnctcnatgg anccntccnt tttaannacn ttctnaactt    660
gggaananncc ctcgnccntn cccccnttaa tcccnccttg cnangnncnt cccccnntcc    720
ncccnnntng gcntntnann cnaaaaaggc ccnnnancaa tctcctnncn cctcanttcg    780
ccanccctcg aaatcggccn c                                             801
```

    <210> 10
    <211> 789
    <212> DNA
    <213> Homo sapien

    <220>
    <221> misc_feature
    <222> (1)...(789)
    <223> n = A,T,C or G

    <400> 10

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cagtctatnt ggccagtgtg gcagctttcc ctgtggctgc cggtgccaca tgcctgtccc    60
acagtgtggc cgtggtgaca gcttcagccg ccctcaccgg gttcaccttc tcagccctgc    120
agatcctgcc ctacacactg gcctccctct accaccggga gaagcaggtg ttcctgccca    180
aataccgagg ggacactgga ggtgctagca gtgaggacag cctgatgacc agcttcctgc    240
caggccctaa gcctggagct cccttcccta atggacacgt gggtgctgga ggcagtggcc    300
tgctcccacc tccacccgcg ctctgcgggg cctctgcctg tgatgtctcc gtacgtgtgg    360
tggtgggtga gcccaccgan gccagggtgg ttccgggccg gggcatctgc ctggacctcg    420
ccatcctgga tagtgcttcc tgctgtccca ngtggcccca tccctgttta tgggctccat    480
tgtccagctc agccagtctg tcactgccta tatggtgtct gccgcaggcc tgggtctggt    540
cccatttact ttgctacaca ggtantattt gacaagaacg anttggccaa atactcagcg    600
```

```
ttaaaaaatt ccagcaacat tggggggtgga aggcctgcct cactgggtcc aactccccgc      660
tcctgttaac cccatggggc tgccggcttg gccgccaatt tctgttgctg ccaaantnat      720
gtggctctct gctgccacct gttgctggct gaagtgcnta cngcncanct ngggggggtng      780
gggngttccc                                                            789
```

```
        <210> 11
        <211> 772
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(772)
        <223> n = A,T,C or G

        <400> 11
cccaccctac ccaaatatta gacaccaaca cagaaaagct agcaatggat tcccttctac       60
tttgttaaat aaataagtta aatatttaaa tgcctgtgtc tctgtgatgg caacagaagg      120
accaacaggc cacatcctga taaaaggtaa gaggggggtg gatcagcaaa aagacagtgc      180
tgtgggctga ggggacctgg ttcttgtgtg ttgcccctca ggactcttcc cctacaaata      240
actttcatat gttcaaatcc catggaggag tgtttcatcc tagaaactcc catgcaagag      300
ctacattaaa cgaagctgca ggttaagggg cttanagatg ggaaaccagg tgactgagtt      360
tattcagctc ccaaaaaccc ttctctaggt gtgtctcaac taggaggcta gctgttaacc      420
ctgagcctgg gtaatccacc tgcagagtcc ccgcattcca gtgcatggaa cccttctggc      480
ctccctgtat aagtccagac tgaaaccccc ttggaaggnc tccagtcagg cagccctana      540
aactgggggaa aaaagaaaag gacgccccan cccccagctg tgcanctacg cacctcaaca      600
gcacagggtg gcagcaaaaa aaccacttta ctttggcaca aacaaaaact nggggggggca      660
accccggcac cccnangggg gttaacagga ancngggnaa cntggaaccc aattnaggca      720
ggcccnccac cccnaatntt gctgggaaat ttttcctccc ctaaattntt tc              772
```

```
        <210> 12
        <211> 751
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(751)
        <223> n = A,T,C or G

        <400> 12
gccccaattc cagctgccac accacccacg gtgactgcat tagttcggat gtcatacaaa       60
agctgattga agcaaccctc tacttttggg tcgtgagcct tttgcttggt gcaggtttca      120
ttggctgtgt tggtgacgtt gtcattgcaa cagaatggggg gaaaggcact gttctctttg      180
aagtanggtg agtcctcaaa atccgtatag ttggtgaagc cacagcactt gagccctttc      240
atggtggtgt tccacacttg agtgaagtct tcctgggaac cataatcttt cttgatggca      300
ggcactacca gcaacgtcag ggaagtgctc agccattgtg gtgtacacca aggcgaccac      360
agcagctgcn acctcagcaa tgaagatgan gaggangatg aagaagaacg tcncgagggc      420
acacttgctc tcagtcttan caccatanca gcccntgaaa accaananca aagaccacna      480
cnccggctgc gatgaagaaa tnaccccncg ttgacaaact tgcatggcac tggganccac      540
agtggcccna aaaatcttca aaaggatgc cccatcnatt gaccccccaa atgcccactg      600
ccaacagggg ctgccccacn cncnnaacga tganccnatt gnacaagatc tncntggtct      660
tnatnaacnt gaaccctgcn tngtggctcc tgttcaggnc cnnggcctga cttctnaann      720
aangaactcn gaagnccccca cngganannc g                                    751
```

```
        <210> 13
        <211> 729
        <212> DNA
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```
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(729)
<223> n = A,T,C or G

<400> 13
gagccaggcg tccctctgcc tgcccactca gtggcaacac ccgggagctg ttttgtcctt      60
tgtggancct cagcagtncc ctctttcaga actcantgcc aagancccctg aacaggagcc     120
accatgcagt gcttcagctt cattaagacc atgatgatcc tcttcaattt gctcatcttt     180
ctgtgtggtg cagccctgtt ggcagtgggc atctgggtgt caatcgatgg ggcatccttt     240
ctgaagatct tcgggccact gtcgtccagt gccatgcagt ttgtcaacgt gggctacttc     300
ctcatcgcag ccggcgttgt ggtcttagct ctaggtttcc tgggctgcta tggtgctaag     360
actgagagca agtgtgccct cgtgacgttc ttcttcatcc tcctcctcat cttcattgct     420
gaggttgcaa tgctgtggtc gccttggtgt acaccacaat ggctgagcac ttcctgacgt     480
tgctggtaat gcctgccatc aanaaaagat tatgggttcc caggaanact tcactcaagt     540
gttgaacac caccatgaaa gggctcaagt gctgtggctt cnnccaacta tacggatttt      600
gaagantcac ctacttcaaa gaaaanagtg cctttccccc atttctgttg caattgacaa     660
acgtccccaa cacagccaat tgaaaacctg cacccaaccc aaangggtcc ccaaccanaa     720
attnaaggg                                                            729
```

```
<210> 14
<211> 816
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(816)
<223> n = A,T,C or G

<400> 14
tgctcttcct caaagttgtt cttgttgcca taacaaccac cataggtaaa gcgggcgcag      60
tgttcgctga aggggttgta gtaccagcgc gggatgctct ccttgcagag tcctgtgtct     120
ggcaggtcca cgcagtgccc tttgtcactg gggaaatgga tgcgctggag ctcgtcaaag     180
ccactcgtgt attttttcaca ggcagcctcg tccgacgcgt cggggcagtt gggggtgtct     240
tcacactcca ggaaactgtc natgcagcag ccattgctgc agcggaactg ggtgggctga     300
cangtgccag agcacactgg atggcgcctt ccatgnnan gggccctgng ggaaagtccc      360
tganccccan anctgcctct caaangcccc accttgcaca ccccgacagg ctagaatgga     420
atcttcttcc cgaaaggtag ttnttcttgt tgcccaancc anccccntaa acaaactctt     480
gcanatctgc tccgnggggg tcntantacc ancgtgggaa aagaacccca ggcngcgaac     540
caancttgtt tggatncgaa gcnataatct nctnttctgc ttggtggaca gcaccantna     600
ctgtnnanct ttagnccntg gtcctcntgg gttgnncttg aacctaatcn ccnntcaact     660
gggacaaggt aantngccnt cctttnaatt cccnancntn cccctggtt tggggtttn       720
cncnctccta ccccagaaan nccgtgttcc cccccaacta ggggccnaaa ccnnttnttc     780
cacaaccctn ccccacccac gggttcngnt ggttng                             816
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<210> 15
<211> 783
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(783)
<223> n = A,T,C or G
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        <400> 15
ccaaggcctg ggcaggcata nacttgaagg tacaacccca ggaacccctg gtgctgaagg     60
atgtggaaaa cacagattgg cgcctactgc ggggtgacac ggatgtcagg gtagagagga    120
aagacccaaa ccaggtggaa ctgtggggac tcaaggaang cacctacctg ttccagctga    180
cagtgactag ctcagaccac ccagaggaca cggccaacgt cacagtcact gtgctgtcca    240
ccaagcagac agaagactac tgcctcgcat ccaacaangt gggtcgctgc cggggctctt    300
tcccacgctg gtactatgac cccacggagc agatctgcaa gagtttcgtt tatggaggct    360
gcttgggcaa caagaacaac taccttcggg aagaagagtg cattctancc tgtcngggtg    420
tgcaaggtgg gcctttgana ngcanctctg gggctcangc gactttcccc caggcccct    480
ccatggaaag gcgccatcca ntgttctctg gcacctgtca gcccacccag ttccgctgca    540
ncaatggctg ctgcatcnac antttcctng aattgtgaca acaccccca ntgcccccaa    600
ccctcccaac aaagcttccc tgttnaaaaa tacnccantt ggcttttnac aaacncccgg    660
cncctccntt ttccccnntn aacaaagggc nctngcnttt gaactgcccn aacccnggaa    720
tctnccnngg aaaaantncc cccctggtt cctnnaancc cctccncnaa anctnccccc    780
ccc                                                                  783


        <210> 16
        <211> 801
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(801)
        <223> n = A,T,C or G

        <400> 16
gccccaattc cagctgccac accacccacg gtgactgcat tagttcggat gtcatacaaa     60
agctgattga agcaaccctc tacttttggg tcgtgagcct tttgcttggt gcaggtttca    120
ttggctgtgt tggtgacgtt gtcattgcaa cagaatgggg gaaaggcact gttctctttg    180
aagtagggtg agtcctcaaa atccgtatag ttggtgaagc cacagcactt gagccctttc    240
atggtggtgt tccacacttg agtgaagtct tcctgggaac cataatcttt cttgatggca    300
ggcactacca gcaacgtcag gaagtgctca gccattgtgg tgtacaccaa ggcgaccaca    360
gcagctgcaa cctcagcaat gaagatgagg aggaggatga agaagaacgt cncgagggca    420
cacttgctct ccgtcttagc accatagcag cccangaaac caagagcaaa gaccacaacg    480
ccngctgcga atgaaagaaa ntacccacgt tgacaaactg catggccact ggacgacagt    540
tggcccgaan atcttcagaa aagggatgcc ccatcgattg aacacccana tgcccactgc    600
cnacagggct gcnccncncn gaaagaatga gccattgaag aaggatcntc ntggtcttaa    660
tgaactgaaa ccntgcatgg tggcccctgt tcagggctct tggcagtgaa ttctganaaa    720
aaggaacngc ntnagccccc ccaaangana aaacaccccc gggtgttgcc ctgaattggc    780
ggccaaggan ccctgccccn g                                              801


        <210> 17
        <211> 740
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(740)
        <223> n = A,T,C or G

        <400> 17
gtgagagcca ggcgtccctc tgcctgccca ctcagtggca acacccggga gctgttttgt     60
cctttgtgga gcctcagcag ttccctcttt cagaactcac tgccaagagc cctgaacagg    120
agccaccatg cagtgcttca gcttcattaa gaccatgatg atcctcttca atttgctcat    180
ctttctgtgt ggtgcagccc tgttggcagt gggcatctgg gtgtcaatcg atggggcatc    240
ctttctgaag atcttcgggc cactgtcgtc cagtgccatg cagtttgtca acgtgggcta    300
```

```
cttcctcatc gcagccggcg ttgtggtctt tgctcttggt ttcctgggct gctatggtgc    360
taagacggag agcaagtgtg ccctcgtgac gttcttcttc atcctcctcc tcatcttcat    420
tgctgaagtt gcagctgctg tggtcgcctt ggtgtacacc acaatggctg aaccattcct    480
gacgttgctg gtantgcctg ccatcaanaa agattatggg ttcccaggaa aaattcactc    540
aantntggaa caccnccatg aaaagggctc caatttctgn tggcttcccc aactataccg    600
gaattttgaa agantcnccc tacttccaaa aaaaaanant tgccttttncc cccnttctgt    660
tgcaatgaaa acntcccaan acngccaatn aaaacctgcc cnnncaaaaa ggntcncaaa    720
caaaaaaant nnaagggttn                                                 740
```

        <210> 18
        <211> 802
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(802)
        <223> n = A,T,C or G

        <400> 18
```
ccgctggttg cgctggtcca gngnagccac gaagcacgtc agcatacaca gcctcaatca     60
caaggtcttc cagctgccgc acattacgca gggcaagagc ctccagcaac actgcatatg    120
ggatacactt tactttagca gccagggtga caactgagag gtgtcgaagc ttattcttct    180
gagcctctgt tagtggagga agattccggg cttcagctaa gtagtcagcg tatgtcccat    240
aagcaaacac tgtgagcagc cggaaggtag aggcaaagtc actctcagcc agctctctaa    300
cattgggcat gtccagcagt tctccaaaca cgtagacacc agnggcctcc agcacctgat    360
ggatgagtgt ggccagcgct gcccccttgg ccgacttggc taggagcaga aattgctcct    420
ggttctgccc tgtcaccttc acttccgcac tcatcactgc actgagtgtg ggggacttgg    480
gctcaggatg tccagagacg tggttccgcc ccctcnctta atgacaccgn ccanncaacc    540
gtcggctccc gccgantgng ttcgtcgtnc ctgggtcagg gtctgctggc cnctacttgc    600
aancttcgtc nggcccatgg aattcaccnc accggaactn gtangatcca ctnnttctat    660
aaccggncgc caccgcnnnt ggaactccac tcttnttncc tttacttgag ggttaaggtc    720
acccttnncg ttaccttggt ccaaaccntn ccntgtgtcg anatngtnaa tcnggnccna    780
tnccanccnc atangaagcc ng                                              802
```

        <210> 19
        <211> 731
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(731)
        <223> n = A,T,C or G

        <400> 19
```
cnaagcttcc aggtacgggg ccgcnaancc tgacccnagg tancanaang cagncngcgg     60
gagcccaccg tcacgnggng gngtctttat nggaggggggc ggagccacat cnctggacnt    120
cntgaccccca actccc.cncc ncncantgca gtgatgagtg cagaactgaa ggtnacgtgg    180
caggaaccaa gancaaannc tgctccnntc caagtcggcn naggggggcgg ggctggccac    240
gcncatccnt cnagtgctgn aaagcccccnn cctgtctact tgtttggaga acngcnnnga    300
catgcccagn gttanataac nggcngagag tnantttgcc tctcccttcc ggctgcgcan    360
cgngtntgct tagnggacat aacctgacta cttaactgaa cccnngaatc tnccncccct    420
ccactaagct cagaacaaaa aacttcgaca ccactcantt gtcacctgnc tgctcaagta    480
aagtgtaccc catncccaat gtntgctnga ngctctgncc tgcnttangt tcggtcctgg    540
gaagacctat caattnaagc tatgtttctg actgcctctt gctccctgna acaancnacc    600
cnncnntcca aggggggggnc ggccccaat cccccaacc ntnaattnan tttancccccn    660
cccccnggcc cggcctttta cnancntcnn nnacngggna aaaccnnngc tttncccaac    720
```

```
nnaatccncc t                                                          731
```

```
        <210> 20
        <211> 754
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(754)
        <223> n = A,T,C or G

        <400> 20
tttttttttt tttttttttt taaaaacccc ctccattnaa tgnaaacttc cgaaattgtc      60
caacccctc ntccaaatnn ccntttccgg gnggggggttc caaacccaan ttanntttgg     120
annttaaatt aaatnttnnt tggnggnnna anccnaatgt nangaaagtt naacccanta     180
tnancttnaa tncctggaaa ccgtngntt ccaaaaatnt ttaaccctta antccctccg      240
aaatngttna nggaaaaccc aanttctcnt aaggttgttt gaaggntnaa tnaaaanccc      300
nnccaattgt ttttngccac gcctgaatta attggnttcc gntgttttcc nttaaaanaa     360
ggnnancccc ggttantnaa tccccccnnc cccaattata ccganttttt ttngaattgg     420
gancccncgg gaattaacgg ggnnnntccc tnttggggg cnggnncccc ccccntcggg      480
ggttngggnc aggncnnaat tgtttaaggg tccgaaaaat ccctccnaga aaaaaanctc     540
ccaggntgag nntngggttt nccccccccc canggcccct ctcgnanagt tggggtttgg     600
ggggcctggg attttnttc ccctnttncc tccccccccc ccngggganag aggttngngt    660
tttgntcnnc ggccccnccn aaganctttn ccganttnan ttaaatccnt gcctnggcga     720
agtccnttgn agggntaaan ggccccctnn cggg                                 754
```

```
        <210> 21
        <211> 755
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(755)
        <223> n = A,T,C or G

        <400> 21
atcancccat gaccccnaac nngggaccnc tcanccggnc nnncnaccnc cggccnatca      60
nngtnagnnc actncnnttn natcacnccc cnccnactac gcccncnanc cnacgcncta     120
nncanatncc actganngcg cgangtngan ngagaaanct nataccanag ncaccanacn     180
ccagctgtcc nanaangcct nnnatacngg nnnatccaat ntgnancctc cnaagtattn     240
nncnncanat gattttcctn anccgattac ccntnccccc tancccctcc ccccccaacna    300
cgaaggcnct ggnccnaagg nngcgncncc ccgctagntc cccnncaagt cncncnccta     360
aactcanccn nattacncgc ttcntgagta tcactccccg aatctcaccc tactcaactc     420
aaaaaanatcn gatacaaaat aatncaagcc tgnttatnac actntgactg ggtctctatt     480
ttagnggtcc ntnaancntc ctaatacttc cagtctncct tcnccaattt ccnaaanggct     540
ctttcngaca gcatnttttg gttccnnttc gggttcttan ngaattgccc ttcntngaac     600
gggctcntct tttccttcgg ttanccktggn ttcnnccggc cagttattat ttcccntttt     660
aaattcntnc cntttanttt tggcnttcna aaccccggc cttgaaaacg gcccctggt       720
aaaaggttgt tttganaaaa tttttgtttt gttcc                               755
```

```
        <210> 22
        <211> 849
        <212> DNA
        <213> Homo sapien

        <220>
```

```
<221> misc_feature
<222> (1)...(849)
<223> n = A,T,C or G

   <400> 22
tttttttttt tttttangtg tngtcgtgca ggtagaggct tactacaant gtgaanacgt     60
acgctnggan taangcgacc cganttctag ganncnccct aaaatcanac tgtgaagatn    120
atcctgnnna cggaanggtc accggnngat nntgctaggg tgnccnctcc cannncnttn    180
cataactcng nggccctgcc caccaccttc ggcggcccng ngnccgggcc cgggtcattn    240
gnnttaaccn cactnngcna ncggtttccn ncccnncng acccnggcga tccggggtnc       300
tctgtcttcc cctgnagncn anaaantggg ccncggnccc ctttacccct nnacaagcca    360
cngccntcta nccncngccc cccctccant nnggggggact gccnanngct ccgttnctng    420
nnaccccnnn gggtncctcg gttgtcgant cnaccgnang ccanggattc cnaaggaagg    480
tgcgttnttg gcccctaccc ttcgctncgg nncacccttc ccgacnanga nccgctcccg    540
cncnncgnng cctcncctcg caacacccgc nctcntcngt ncggnnnccc ccccacccgc    600
nccctcncnc ngncgnancn ctccnccncc gtctcannca ccaccccgcc ccgccaggcc    660
ntcanccacn ggnngacnng nagcncnntc gcnccgcgcn gcgncnccct cgccncngaa    720
ctncntcngg ccantnncgc tcaaccnna cnaaacgccg ctgcgcggcc cgnagcgncc     780
ncctccncga gtcctcccgn cttccnaccc angnnttccn cgaggacacn nnaccccgcc    840
nncangcgg                                                                  849

   <210> 23
   <211> 872
   <212> DNA
   <213> Homo sapien

   <220>
   <221> misc_feature
   <222> (1)...(872)
   <223> n = A,T,C or G

   <400> 23
gcgcaaacta tacttcgctc gnactcgtgc gcctcgctnc tcttttcctc cgcaaccatg     60
tctgacnanc ccgattnggc ngatatcnan aagntcganc agtccaaact gantaacaca    120
cacacncnan aganaaatcc nctgccttcc anagtanacn attgaacnng agaaccangc    180
nggcgaatcg taatnaggcg tgcgccgcca atntgtcncc gtttattntn ccagcntcnc    240
ctnccnaccc tacntcttcn nagctgtcnn acccctngtn cgnacccccc naggtcggga    300
tcgggtttnn nntgaccgng cnnccccctcc ccccntccat nacganccnc ccgcaccacc    360
nanngcncgc nccccgnnct cttcgccncc ctgtcctntn cccctgtngc ctggcncngn    420
accgcattga ccctcgccnn ctncnngaaa ncgnanacgt ccgggttgnn annancgctg    480
tgggnnngcg tctgcnccgc gttccttccn ncnncttcca ccatcttcnt tacnggggtct    540
ccncgccntc tcnnncacnc cctgggacgc tntcctntgc cccccttnac tcccccccctt    600
cgncgtgncc cgnccccacc ntcatttnca nacgntcttc acaannncct ggntnnctcc    660
cnancngncn gtcanccnag ggaagggngg ggnnccnntg nttgacgttg nggngangtc    720
cgaanantcc tcnccntcan cnctacccct cgggcgnnct ctcngttncc aacttancaa    780
ntctccccg ngngcncntc tcagcctcnc ccncccccnct ctctgcantg tnctctgctc    840
tnaccnntac gantnttcgn cnccctcttt cc                                      872

   <210> 24
   <211> 815
   <212> DNA
   <213> Homo sapien

   <220>
   <221> misc_feature
   <222> (1)...(815)
   <223> n = A,T,C or G
```

12

```
<400> 24
gcatgcaagc ttgagtattc tatagngtca cctaaatanc ttggcntaat catggtcnta     60
nctgncttcc tgtgtcaaat gtatacnaan tanatatgaa tctnatntga caaganngta    120
tcntncatta gtaacaantg tnntgtccat cctgtcngan canattccca tnnattncgn    180
cgcattcncn gcncantatn taatngggaa ntcnnntnnn ncaccnncat ctatcntncc    240
gcnccctgac tggnagagat ggatnanttc tnntntgacc nacatgttca tcttggattn    300
aananccccc cgcngnccac cggttngnng cnagccnntc ccaagacctc ctgtggaggt    360
aacctgcgtc aganncatca aacntgggaa acccgcnncc angtnnaagt ngnnncanan    420
gatcccgtcc aggnttnacc atcccttcnc agcgccccct ttngtgcctt anagngnagc    480
gtgtccnanc cnctcaacat ganacgcgcc agnccanccg caattnggca caatgtcgnc    540
gaacccccta gggggantna tncaaanccc caggattgtc cncncangaa atcccncanc    600
cccnccctac ccnnctttgg gacngtgacc aantcccgga gtnccagtcc ggccngnctc    660
ccccaccggt nnccntgggg gggtgaanct cngnntcanc cngncgaggn ntcgnaagga    720
accggncctn ggncgaannng ancnntcnga agngccncnt cgtataaccc cccctcncca    780
nccnacngnt agntcccccc cngggtncgg aangg                                815

    <210> 25
    <211> 775
    <212> DNA
    <213> Homo sapien

    <220>
    <221> misc_feature
    <222> (1)..,(775)
    <223> n = A,T,C or G

    <400> 25
ccgagatgtc tcgctccgtg gccttagctg tgctcgcgct actctctctt tctggcctgg     60
aggctatcca gcgtactcca aagattcagg tttactcacg tcatccagca gagaatggaa    120
agtcaaattt cctgaattgc tatgtgtctg ggtttcatcc atccgacatt gaanttgact    180
tactgaagaa tgganagaga attgaaaaag tggagcattc agacttgtct ttcagcaagg    240
actggtcttt ctatctcntg tactacactg aattcacccc cactgaaaaa gatgagtatg    300
cctgccgtgt gaaccatgtg actttgtcac agcccaagat agttaagtgg gatcgagaca    360
tgtaagcagn cnncatggaa gtttgaagat gccgcatttg gattggatga attccaaatt    420
ctgcttgctt gcnttttaat antgatatgc ntatacaccc tacccttttat gnccccaaat    480
tgtaggggtt acatnantgt tcncntngga catgatcttc ctttataant ccnccnttcg    540
aattgcccgt cncccngttn ngaatgtttc cnnaaccacg gttggctccc ccaggtcncc    600
tcttacggaa gggcctgggc cnctttncaa ggttggggga accnaaaatt tcncttntgc    660
ccncccncca cnntcttgng nncncanttt ggaacccttc cnattcccct tggcctcnna    720
nccttnncta anaaaacttn aaancgtngc naaannttn acttcccccc ttacc          775

    <210> 26
    <211> 820
    <212> DNA
    <213> Homo sapien

    <220>
    <221> misc_feature
    <222> (1)...(820)
    <223> n = A,T,C or G

    <400> 26
anattantac agtgtaatct tttcccagag gtgtgtanag ggaacggggc ctagaggcat     60
cccanagata ncttatanca acagtgcttt gaccaagagc tgctgggcac atttcctgca    120
gaaaaggtgg cggtccccat cactcctcct ctcccatagc catcccagag gggtgagtag    180
ccatcangcc ttcggtggga gggagtcang gaaacaacan accacagagc anacagacca    240
ntgatgacca tgggcgggag cgagcctctt ccctgnaccg gggtggcana nganagccta    300
nctgagcggt cacactataa acgttaacga ccnagatnan cacctgcttc aagtgcaccc    360
```

```
ttcctacctg acnaccagng accnnnaact gcngcctggg gacagcnctg ggancagcta    420
acnnagcact cacctgcccc cccatggccg tncgcntccc tggtcctgnc aagggaagct    480
ccctgttgga attncgggga naccaaggga nccccctcct ccanctgtga aggaaaaann    540
gatggaattt tncccttccg gccnntcccc tcttcctta cacgccccct nntactcntc    600
tccctctntt ntcctgncnc acttttnacc ccnnnatttc ccttnattga tcggannctn    660
ganattccac tnncgcctnc cntcnatcng naanacnaaa nactntctna cccnggggat    720
gggnncctcg ntcatcctct ctttttcnct accnccnntt ctttgcctct ccttngatca    780
tccaaccntc gntggccntn ccccccccnnn tcctttnccc                .       820
```

```
            <210> 27
            <211> 818
            <212> DNA
            <213> Homo sapien

            <220>
            <221> misc_feature
            <222> (1)...(818)
            <223> n = A,T,C or G

            <400> 27
tctgggtgat ggcctcttcc tcctcaggga cctctgactg ctctgggcca aagaatctct     60
tgtttcttct ccgagcccca ggcagcggtg attcagccct gcccaacctg attctgatga    120
ctgcggatgc tgtgacggac ccaaggggca aatagggtcc cagggtccag ggaggggcgc    180
ctgctgagca cttccgcccc tcaccctgcc cagcccctgc catgagctct gggctgggtc    240
tccgcctcca gggttctgct cttccangca ngccancaag tggcgctggg ccacactggc    300
ttcttcctgc cccntccctg gctctgantc tctgtcttcc tgtcctgtgc angcnccttg    360
gatctcagtt tccctcnctc anngaactct gtttctgann tcttcantta actntgantt    420
tatnaccnan tggnctgtnc tgtcnnactt taatgggccn gaccggctaa tccctccctc    480
nctcccttcc anttcnnnna accngcttnc cntcntctcc cntancccg ccngggaanc.    540
ctcctttgcc ctnaccangg gccnnnaccg cccntnnctn gggggggcnng gtnnctncnc    600
ctgntnnccc cnctcncnnt tncctcgtcc cnncnncgcn nngcannttc ncngtcccnn    660
tnnctcttcn ngtntcgnaa ngntcncntn tnnnnngncn ngntnntncn tccctctcnc    720
cnnntgnang tnnttnnnnc ncngnncccc nnnncnnnnn nggnnntnnn tctncncngc    780
cccnnccccc ngnattaagg cctccnntct ccggccnc                            818
```

```
            <210> 28
            <211> 731
            <212> DNA
            <213> Homo sapien

            <220>
          . <221> misc_feature
            <222> (1)...(731)
            <223> n = A,T,C or G

            <400> 28
aggaagggcg gagggatatt gtangggatt gagggatagg agnataangg gggaggtgtg     60
tcccaacatg anggtgnngt tctctttttga angagggttg ngtttttann ccnggtgggt    120
gattnaaccc cattgtatgg agnnaaaggn tttnagggat ttttcggctc ttatcagtat    180
ntanattcct gtnaatcgga aaatnatntt tcnncnggaa aatnttgctc ccatccgnaa    240
attnctcccg ggtagtgcat nttnggggggn cngccangtt tcccaggctg ctanaatcgt    300
actaaagntt naagtgggan tncaaatgaa aacctnncac agagnatccn tacccgactg    360
tnnnttncct tcgccctntg actctgcnng agcccaatac ccnngngnat gtcncccngn    420
nnngcgncnc tgaaannnnc tcgnggctnn gancatcang gggtttcgca tcaaaagcnn    480
cgtttcncat naaggcactt tngcctcatc caaccnctng ccctcnncca tttngccgtc    540
nggttcncct acgctnnntng cncctnnntn ganattttnc ccgcctnggg naanccttct   600
gnaatgggta gggncttntc ttttnaccnn gnggtntact aatcnnctnc acgcntnctt    660
tctcnacccc ccccctttt caatcccanc ggcnaatggg gtctcccnn cganggggggg    720
```

```
nnncccannc c                                                          731
```

```
        <210> 29
        <211> 822
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(822)
        <223> n = A,T,C or G

        <400> 29
actagtccag tgtggtggaa ttccattgtg ttggggncnc ttctatgant antnttagat     60
cgctcanacc tcacancctc ccnacnangc ctataangaa nannaataga nctgtncnnt    120
atntntacnc tcatanncct cnnnacccac tccctcttaa cccntactgt gcctatngcn    180
tnnctantct ntgccgcctn cnanccaccn gtgggccnac cncnngnatt ctcnatctcc    240
tcnccatntn gcctananta ngtncatacc ctatacctac nccaatgcta nnnctaancn    300
tccatnantt annntaacta ccactgacnt ngactttcnc atnanctcct aatttgaatc    360
tactctgact cccacngcct annnattagc ancntccccc nacnatntct caaccaaatc    420
ntcaacaacc tatctanctg ttcnccaacc nttncctccg atccccnnac aacccccctc    480
ccaaataccc nccacctgac ncctaacccn caccatcccg gcaagccnan ggncatttan    540
ccactggaat cacnatngga naaaaaaaac ccnaactctc tancncnnat ctccctaana    600
aatnctcctn naatttactn ncantnccat caancccacn tgaaacnnaa cccctgtttt    660
tanatccctt ctttcgaaaa ccnacccttt annncccaac ctttngggcc cccccnctnc    720
ccnaatgaag gncncccaat cnangaaacg nccntgaaaa ancnaggcna anannntccg    780
canatcctat cccttanttn ggggnccctt ncccngggcc cc                       822
```

```
        <210> 30
        <211> 787
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(787)
        <223> n = A,T,C or G

        <400> 30
cggccgcctg ctctggcaca tgcctcctga atggcatcaa aagtgatgga ctgcccattg     60
ctagagaaga ccttctctcc tactgtcatt atggagccct gcagactgag ggctcccctt    120
gtctgcagga tttgatgtct gaagtcgtgg agtgtggctt ggagctcctc atctacatna    180
gctggaagcc ctggagggcc tctctcgcca gcctcccect tctctccacg ctctccangg    240
acaccagggg ctccaggcag cccattattc ccagnangac atggtgtttc tccacgcgga    300
cccatggggc ctgnaaggcc agggtctcct ttgacaccat ctctcccgtc ctgcctggca    360
ggccgtggga tccactantt ctanaacggn cgccaccncg gtgggagctc cagcttttgt    420
tcccnttaat gaaggttaat tgcncgcttg gcgtaatcat nggtcanaac tntttcctgt    480
gtgaaattgt ttntcccctc ncnattccnc ncnacatacn aacccggaan cataaagtgt    540
taaagcctgg gggtngcctn nngaatnaac tnaactcaat taattgcgtt ggctcatggc    600
ccgctttccn ttcnggaaaa ctgtcntccc ctgcnttnnt gaatcggcca cccccnggg    660
aaaagcggtt tgcnttttng ggggntcctt ccncttcccc cctcnctaan ccctncgcct    720
cggtcgttnc nggtngcggg gaanggnat nnnctcccnc naagggggng agnnngntat    780
ccccaaa                                                              787
```

```
        <210> 31
        <211> 799
        <212> DNA
        <213> Homo sapien
```

```
<220>
<221> misc_feature
<222> (1)...(799)
<223> n = A,T,C or G

    <400> 31
    tttttttttt tttttttggc gatgctactg tttaattgca ggaggtgggg gtgtgtgtac        60
    catgtaccag ggctattaga agcaagaagg aaggagggag ggcagagcgc cctgctgagc·      120
    aacaaaggac tcctgcagcc ttctctgtct gtctcttggc gcaggcacat ggggaggcct       180
    cccgcagggt gggggccacc agtccagggg tgggagcact acangggtg ggagtgggtg        240
    gtggctggtn cnaatggcct gncacanatc cctacgattc ttgacacctg gatttcacca       300
    ggggaccttc tgttctccca nggnaacttc ntnnatctcn aaagaacaca actgtttctt       360
    cngcanttct ggctgttcat ggaaagcaca ggtgtccnat ttnggctggg acttggtaca       420
    tatggttccg gcccacctct cccntcnaan aagtaattca cccccccccn cntctnttg        480
    cctgggccct taantaccca caccggaact canttantta ttcatcttng gntgggcttg       540
    ntnatcnccn cctgaangcg ccaagttgaa aggccacgcc gtncccnctc cccatagnan       600
    nttttnncnt canctaatgc ccccccnggc aacnatccaa tcccccccn tggggggcccc       660
    agcccanggc ccccgnctcg ggnnnccngn cncgnantcc ccaggntctc ccantcngnc       720
    ccnnngcncc cccgcacgca gaacanaagg ntngagccnc cgcannnnnn nggtnncnac       780
    ·ctcgcccccc ccnncgnng                                                    799
```

```
    <210> 32
    <211> 789
    <212> DNA
    <213> Homo sapien

    <220>
    <221> misc_feature
    <222> (1)...(789)
    <223> n = A,T,C or G

    <400>·32
    tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt        60
    ttttnccnag ggcaggttta ttgacaacct cncgggacac aancaggctg gggacaggac       120
    ggcaacaggc tccggcggcg gcggcggcgg ccctacctgc ggtaccaaat ntgcagcctc       180
    cgctcccgct tgatnttcct ctgcagctgc aggatgccnt aaaacagggc ctcggccntn       240
    ggtgggcacc ctgggatttn aatttccacg ggcacaatgc ggtcgcancc cctcaccacc       300
    nattaggaat agtggtntta cccnccnccg ttggcncact cccntggaa accacttntc        360
    gcggctccgg catctggtct taaaccttgc aaacnctggg gccctctttt tggttantnt       420
    nccngccaca atcatnactc agactggcnc gggctggccc caaaaaancn ccccaaaacc       480
    ggnccatgtc ttnncggggt tgctgcnatn tncatcacct cccgggcnca ncaggncaac       540
    ccaaaagttc ttgnggcccn caaaaaanct ccggggggnc ccagtttcaa caaagtcatc       600
    cccttggcc cccaaatcct cccccgntt nctgggtttg ggaacccacg cctctnnctt        660
    tggnnggcaa gntggntccc ccttcgggcc cccggtgggc ccnnctctaa ngaaaacncc       720
    ntcctnnnca ccatcccccc nngnnacgnc tancaangna tccctttttt tanaaacggg       780
    ccccccncg                                                               789
```

```
    <210> 33
    <211> 793
    <212> DNA
    <213> Homo sapien

    <220>
    <221> misc_feature
    <222> (1)...(793)
    <223> n = A,T,C or G
```

```
        <400> 33
gacagaacat gttggatggt ggagcacctt tctatacgac ttacaggaca gcagatgggg    60
aattcatggc tgttggagca atanaacccc agttctacga gctgctgatc aaaggacttg   120
gactaaagtc tgatgaactt cccaatcaga tgagcatgga tgattggcca gaaatgaana   180
agaagtttgc agatgtattt gcaaagaaga cgaaggcaga gtggtgtcaa atctttgacg   240
gcacagatgc ctgtgtgact ccggttctga cttttgagga ggttgttcat catgatcaca   300
acaangaacg gggctcgttt atcaccantg aggagcagga cgtgagcccc cgccctgcac   360
ctctgctgtt aaacacccca gccatccctt ctttcaaaag ggatccacta cttctagagc   420
ggncgccacc gcggtggagc tccagctttt gttcccttta gtgagggtta attgcgcgct   480
tggcgtaatc atggtcatan ctgtttcctg tgtgaaattg ttatccgctc acaattccac   540
acaacatacg anccggaagc atnaaatttt aaagcctggn ggtngcctaa tgantgaact   600
nactcacatt aattggcttt gcgctcactg cccgctttcc agtccggaaa acctgtcctt   660
gccagctgcc nttaatgaat cnggccaccc cccggggaaa aggcngtttg cttnttgggg   720
cgcncttccc gctttctcgc ttcctgaant ccttcccccc ggtctttcgg cttgcggcna   780
acggtatcna cct                                                      793

        <210> 34
        <211> 756
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(756)
        <223> n = A,T,C or G

        <400> 34
gccgcgaccg gcatgtacga gcaactcaag ggcgagtgga accgtaaaag ccccaatctt    60
ancaagtgcg gggaanagct gggtcgactc aagctagttc ttctggagct caacttcttg   120
ccaaccacag ggaccaagct gaccaaacag cagctaattc tggcccgtga catactggag   180
atcggggccc aatggagcat cctacgcaan gacatcccct ccttcgagcg ctacatggcc   240
cagctcaaat gctactactt tgattacaan gagcagctcc ccgagtcagc ctatatgcac   300
cagctcttgg gcctcaacct cctcttcctg ctgtcccaga accgggtggc tgantnccac   360
acgganttgg ancggctgcc tgcccaanga catacanacc aatgtctaca tcnaccacca   420
gtgtcctgga gcaatactga tgganggcag ctaccncaaa gtnttcctgg ccnagggtaa   480
catcccccgc cgagagctac accttcttca ttgacatcct gctcgacact atcagggatg   540
aaaatcgcng ggttgctcca gaaaggctnc aanaanatcc ttttcnctga aggcccccgg   600
atncnctagt nctagaatcg gcccgccatc gcggtgganc ctccaacctt tcgttnccct   660
ttactgaggg ttnattgccg cccttggcgt tatcatggtc acnccngttn cctgtgttga   720
aattnttaac ccccacaat tccacgccna cattng                              756

        <210> 35
        <211> 834
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(834)
        <223> n = A,T,C or G

        <400> 35
ggggatctct anatcnacct gnatgcatgg ttgtcggtgt ggtcgctgtc gatgaanatg    60
aacaggatct tgcccttgaa gctctcggct gctgtnttta agttgctcag tctgccgtca   120
tagtcagaca cnctcttggg caaaaaacan caggatntga gtcttgattt cacctccaat   180
aatcttcngg gctgtctgct cggtgaactc gatgacnang ggcagctggt tgtgtgtntgat   240
aaantccanc angttctcct tggtgacctc cccttcaaag ttgttccggc cttcatcaaa   300
cttctnnaan angannancc canctttgtc gagctgggnat ttgganaaca cgtcactgtt   360
```

```
ggaaactgat cccaaatggt atgtcatcca tcgcctctgc tgcctgcaaa aaacttgctt    420
ggcncaaatc cgactcccn tccttgaaag aagccnatca cacccccctc cctggactcc    480
nncaangact ctnccgctnc ccntccnng cagggttggt ggcannccgg gcccntgcgc    540
ttcttcagcc agttcacnat nttcatcagc ccctctgcca gctgttntat tccttggggg    600
ggaanccgtc tctcccttcc tgaannaact ttgaccgtng gaatagccgc gcntcnccnt    660
acntnctggg ccgggttcaa antccctccn ttgncnntcn cctcgggcca ttctggattt    720
nccnaacttt ttccttcccc cnccccncgg ngtttggntt tttcatnggg ccccaactct    780
gctnttggcc antccctgg gggcntntan cnccccctnt ggtcccntng ggcc           834
```

```
        <210> 36
        <211> 814
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(814)
        <223> n = A,T,C or G

        <400> 36
cggncgcttt ccngccgcgc cccgtttcca tgacnaaggc tcccttcang ttaaatacnn    60
cctagnaaac attaatgggt tgctctacta atacatcata cnaaccagta agcctgccca    120
naacgccaac tcaggccatt cctaccaaag gaagaaaggc tggtctctcc accccctgta    180
ggaaaggcct gccttgtaag acaccacaat ncggctgaat ctnaagtctt gtgttttact    240
aatggaaaaa aaaaataaac aanaggtttt gttctcatgg ctgcccaccg cagcctggca    300
ctaaaacanc ccagcgctca cttctgcttg ganaaatatt ctttgctctt ttggacatca    360
ggcttgatgg tatcactgcc acntttccac ccagctgggc ncccttcccc catntttgtc    420
antganctgg aaggcctgaa ncttagtctc caaaagtctc ngcccacaag accggccacc    480
aggggangtc ntttncagtg gatctgccaa anantacccn tatcatcnnt gaataaaaag    540
gccctgaac ganatgcttc cancancctt taagacccat aatcctngaa ccatggtgcc    600
cttccggtct gatccnaaag gaatgttcct gggtcccant ccctcctttg ttncttacgt    660
tgtnttggac ccntgctngn atnacccaan tganatcccc ngaagcaccc tnccccctggc   720
atttganttt cntaaaattct ctgccctacn nctgaaagca cnattccctn ggcnccnaan    780
ggngaactca agaaggtctn ngaaaaacca cncn                                814
```

```
        <210> 37
        <211> 760
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(760)
        <223> n = A,T,C or G

        <400> 37
gcatgctgct cttcctcaaa gttgttcttg ttgccataac aaccaccata ggtaaagcgg    60
gcgcagtgtt cgctgaaggg gttgtagtac cagcgcggga tgctctcctt gcagagtcct    120
gtgtctggca ggtccacgca atgccctttg tcactgggga aatggatgcg ctggagctcg    180
tcnaanccac tcgtgtattt ttcacangca gcctcctccg aagcntccgg gcagttgggg    240
gtgtcgtcac actccactaa actgtcgatn cancagccca ttgctgcagc ggaactgggt    300
gggctgacag gtgccagaac acactggatn ggcctttcca tggaagggcc tggggggaaat   360
cncctnancc caaactgcct ctcaaaggcc accttgcaca ccccgacagg ctagaaatgc    420
actcttcttc ccaaaggtag ttgttcttgt tgcccaagca ncctccanca aaccaaaanc    480
ttgcaaaatc tgctccgtgg gggtcatnnn taccanggtt ggggaaanaa acccggcngn    540
ganccncctt gtttgaatgc naaggnaata atcctcctgt cttgcttggg tggaanagca    600
caattgaact gttaacnttg ggccgngttc cnctngggtg gtctgaaact aatcaccgtc    660
actggaaaaa ggtangtgcc ttccttgaat tcccaaantt ccccctngntt tgggtnnttt    720
```

ctcctctncc ctaaaaatcg tnttcccccc ccntanggcg   760

```
        <210> 38
        <211> 724
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(724)
        <223> n = A,T,C or G

        <400> 38
tttttttttt tttttttttt tttttttttt tttttaaaaa ccccctccat tgaatgaaaa       60
cttccnaaat tgtccaaccc cctcnnccaa atnnccattt ccggggggg gttccaaacc       120
caaattaatt ttgganttta aattaaatnt tnattngggg aanaanccaa atgtnaagaa       180
aatttaaccc attatnaact taaatnccta gaaacccntg gnttccaaaa atttttaacc       240
cttaaatccc tccgaaattg ntaanggaaa accaaattcn cctaaggctn tttgaaggtt       300
ngatttaaac cccottnant tnttttacc cnngnctnaa ntatttngnt tccggtgttt       360
tcctnttaan cntnggtaac tcccgntaat gaannnccct aanccaatta aaccgaattt       420
ttttgaatt ggaaattccn ngggaattna ccggggtttt tcccntttgg gggccatncc       480
cccnctttcg gggtttgggn ntaggttgaa tttttnnang ncccaaaaaa nccccaana       540
aaaaaactcc caagnnttaa ttngaatntc cccottccca ggccttttgg gaaaggnggg       600
tttntggggg ccngggantt cnttcccccn ttnccncccc ccccccnggt aaangttat       660
ngnntttggt ttttgggccc cttnanggac cttccggatn gaaattaaat ccccgggncg       720
gccg                                                                   724

        <210> 39
        <211> 751
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(751)
        <223> n = A,T,C or G

        <400> 39
tttttttttt tttttctttg ctcacattta atttttattt tgattttttt taatgctgca       60
caacacaata tttatttcat ttgtttcttt tatttcattt tatttgtttg ctgctgctgt       120
tttatttatt tttactgaaa gtgagaggga acttttgtgg ccttttttcc ttttttctgta     180
ggccgcctta agctttctaa atttggaaca tctaagcaag ctgaanggaa aaggggggttt     240
cgcaaaatca ctcgggggaa nggaaaggtt gctttgttaa tcatgcccta tggtgggtga      300
ttaactgctt gtacaattac ntttcacttt taattaattg tgctnaangc tttaattana     360
cttgggggtt ccctccccan accaaccccn ctgacaaaaa gtgccngccc tcaaatnatg     420
tcccggcnnt cnttgaaaca cacngcngaa ngttctcatt ntccccncnc caggtnaaaa     480
tgaagggtta ccatntttaa cnccacctcc acntggcnnn gcctgaatcc tcnaaaancn     540
ccctcaancn aattnctnng ccccggtcnc gcntnngtcc cnccoggget ccgggaantn     600
cacccccnga annonntnnc naacnaaatt ccgaaatat tcccnntcnc tcaattcccc     660
cnnagactnt cctcnncnan cncaattttc ttttnntcac gaacncgnnc cnnaaaatgn     720
nnnncncctc cnctngtccn naatcnccan c                                     751

        <210> 40
        <211> 753
        <212> DNA
        <213> Homo sapien

        <220>
```

19

```
<221> misc_feature
<222> (1)...(753)
<223> n = A,T,C or G

<400> 40
gtggtatttt ctgtaagatc aggtgttcct ccctcgtagg tttagaggaa acaccctcat      60
agatgaaaac cccccgaga cagcagcact gcaactgcca agcagccggg gtaggagggg       120
cgccctatgc acagctgggc ccttgagaca gcagggcttc gatgtcaggc tcgatgtcaa      180
tggtctggaa gcggcggctg tacctgcgta ggggcacacc gtcagggccc accaggaact      240
tctcaaagtt ccaggcaacn tcgttgcgac acaccggaga ccaggtgatn agcttggggt      300
cggtcataan cgcggtggcg tcgtcgctgg gagctggcag ggcctcccgc aggaaggcna      360
ataaaaggtg cgcccccgca ccgttcanct cgcacttctc naanaccatg angttgggct      420
cnaacccacc accannccgg acttccttga nggaattccc aaatctcttc gntcttgggc      480
ttctnctgat gccctanctg gttgcccngn atgccaanca nccccaancc ccggggtcct      540
aaancacccn cctcctcntt tcatctgggt tnttntcccc ggaccntggt tcctctcaag      600
ggancccata tctcnaccan tactcaccnt nccccccnt gnnacccanc cttctanngn       660
ttcccncccg ncctctggcc cntcaaanan gcttncacna cctgggtctg ccttcccccc      720
tncctatct gnacccncn tttgtctcan tnt                                    753


<210> 41
<211> 341
<212> DNA
<213> Homo sapien

<400> 41
actatatcca tcacaacaga catgcttcat cccatagact tcttgacata gcttcaaatg      60
agtgaaccca tccttgattt atatacatat atgttctcag tattttggga gcctttccac      120
ttctttaaac cttgttcatt atgaacactg aaaataggaa tttgtgaaga gttaaaaagt      180
tatagcttgt ttacgtagta agttttgaa gtctacattc aatccagaca cttagttgag       240
tgttaaactg tgatttttaa aaaatatcat ttgagaatat tctttcagag gtattttcat      300
ttttacttt tgattaattg tgttttatat attagggtag t                          341


<210> 42
<211> 101
<212> DNA
<213> Homo sapien

<400> 42
acttactgaa tttagttctg tgctcttcct tatttagtgt tgtatcataa atactttgat      60
gtttcaaaca ttctaaataa ataattttca gtggcttcat a                          101


<210> 43
<211> 305
<212> DNA
<213> Homo sapien

<400> 43
acatctttgt tacagtctaa gatgtgttct taaatcacca ttccttcctg gtcctcaccc      60
tccagggtgg tctcacactg taattagagc tattgaggag tctttacagc aaattaagat      120
tcagatgcct tgctaagtct agagttctag agttatgttt cagaaagtct aagaaaccca      180
cctcttgaga ggtcagtaaa gaggacttaa tatttcatat ctacaaaatg accacaggat      240
tggatacaga acgagagtta tcctggataa ctcagagctg agtacctgcc cggggggccgc     300
tcgaa                                                                 305


<210> 44
<211> 852
<212> DNA
<213> Homo sapien
```

```
<220>
<221> misc_feature
<222> (1)...(852)
<223> n = A,T,C or G

    <400> 44
acataaatat cagagaaaag tagtctttga aatatttacg tccaggagtt ctttgtttct        60
gattatttgg tgtgtgtttt ggtttgtgtc caaagtattg gcagcttcag ttttcatttt       120
ctctccatcc tcgggcattc ttcccaaatt tatataccag tcttcgtcca tccacacgct       180
ccagaatttc tcttttgtag taatatctca tagctcggct gagcttttca taggtcatgc       240
tgctgttgtt cttcttttta ccccatagct gagccactgc ctctgatttc aagaacctga       300
agacgccctc agatcggtct tcccatttta ttaatcctgg gttcttgtct gggttcaaga       360
ggatgtcgcg gatgaattcc cataagtgag tccctctcgg gttgtgcttt ttggtgtggc       420
acttggcagg ggggtcttgc tccttttttca tatcaggtga ctctgcaaca ggaaggtgac       480
tggtggttgt catggagatc tgagcccggc agaaagtttt gctgtccaac aaatctactg       540
tgctaccata gttggtgtca tataaatagt tctngtcttt ccaggtgttc atgatggaag       600
gctcagtttg ttcagtcttg acaatgacat tgtgtgtgga ctggaacagg tcactactgc       660
actggccgtt ccacttcaga tgctgcaagt tgctgtagag gagntgcccc gccgtccctg       720
ccgcccgggt gaactcctgc aaactcatgc tgcaaaggtg ctcgccgttg atgtcgaact       780
cntggaaagg gatacaattg gcatccagct ggttggtgtc caggaggtga tggagccact       840
cccacacctg gt                                                           852

    <210> 45
    <211> 234
    <212> DNA
    <213> Homo sapien


    <400> 45
acaacagacc cttgctcgct aacgacctca tgctcatcaa gttggacgaa tccgtgtccg        60
agtctgacac catccggagc atcagcattg cttcgcagtg ccctaccgcg gggaactctt       120
gcctcgtttc tggctggggt ctgctggcga acggcagaat gcctaccgtg ctgcagtgcg       180
tgaacgtgtc ggtggtgtct gaggaggtct gcagtaagct ctatgacccg ctgt            234

    <210> 46
    <211> 590
    <212> DNA
    <213> Homo sapien


    <220>
    <221> misc_feature
    <222> (1)...(590)
    <223> n = A,T,C or G

    <400> 46
acttttattt taaatgttta taaggcagat ctatgagaat gatagaaaac atggtgtgta        60
atttgatagc aatatttttgg agattacaga gttttagtaa ttaccaatta cacagttaaa      120
aagaagataa tatattccaa gcanatacaa aatatctaat gaaagatcaa ggcaggaaaa       180
tgantataac taattgacaa tggaaaatca attttaatgt gaattgcaca ttatcctttta     240
aaagctttca aaanaaanaa ttattgcagt ctanttaatt caaacagtgt aaatggtat       300
caggataaan aactgaaggg canaaagaat taattttcac ttcatgtaac ncacccanat       360
ttacaatggc ttaaatgcan ggaaaaagca gtggaagtag ggaagtantc aaggtctttc      420
tggtctctaa tctgccttac tctttgggtg tggctttgat cctctggaga cagctgccag       480
ggctcctgtt atatccacaa tcccagcagc aagatgaagg gatgaaaaag gacacatgct       540
gccttccttt gaggagactt catctcactg gccaacactc agtcacatgt                 590

    <210> 47
    <211> 774
```

```
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(774)
        <223> n = A,T,C or G

        <400> 47
acaaggggc ataatgaagg agtggggana gattttaaag aaggaaaaaa aacgaggccc      60.
tgaacagaat tttcctgnac aacggggctt caaaataatt ttcttgggga ggttcaagac     120
gcttcactgc ttgaaactta aatggatgtg ggacanaatt ttctgtaatg accctgaggg     180
cattacagac gggactctgg gaggaaggat aaacagaaag gggacaaagg ctaatcccaa     240
aacatcaaag aaaggaaggt ggcgtcatac ctcccagcct acacagttct ccagggctct     300
cctcatccct ggaggacgac agtggaggaa caactgacca tgtccccagg ctcctgtgtg     360
ctggctcctg gtcttcagcc cccagctctg gaagcccacc ctctgctgat cctgcgtggc     420
ccacactcct tgaacacaca tccccaggtt atattcctgg acatggctga acctcctatt     480
cctacttccg agatgccttg ctccctgcag cctgtcaaaa tcccactcac cctccaaacc     540
acggcatggg aagcctttct gacttgcctg attactccag catcttggaa caatccctga     600
ttccccactc cttagaggca agataggtg gttaagagta gggctggacc acttggagcc      660
aggctgctgg cttcaaattn tggctcattt acgagctatg ggaccttggg caagtnatct     720
tcacttctat gggcntcatt ttgttctacc tgcaaaatgg gggataataa tagt           774

        <210> 48
        <211> 124
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(124)
        <223> n = A,T,C or G

        <400> 48
canaaattga aattttataa aaaggcattt ttctcttata tccataaaat gatataattt      60
ttgcaantat anaaatgtgt cataaattat aatgttcctt aattacagct caacgcaact     120
tggt                                                                   124

        <210> 49
        <211> 147
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(147)
        <223> n = A,T,C or G

        <400> 49
gccgatgcta ctattttatt gcaggaggtg ggggtgtttt tattattctc tcaacagctt      60
tgtggctaca ggtggtgtct gactgcatna aaaanttttt tacgggtgat tgcaaaaatt     120
ttagggcacc catatcccaa gcantgt                                          147

        <210> 50
        <211> 107
        <212> DNA
        <213> Homo sapien
```

```
        <400> 50
acattaaatt aataaaagga ctgttggggt tctgctaaaa cacatggctt gatatattgc      60
atggtttgag gttaggagga gttaggcata tgttttggga gagggt                    107


        <210> 51
        <211> 204
        <212> DNA
        <213> Homo sapien


        <400> 51
gtcctaggaa gtctagggga cacacgactc tggggtcacg gggccgacac acttgcacgg      60
cgggaaggaa aggcagagaa gtgacaccgt caggggggaaa tgacagaaag gaaaatcaag    120
gccttgcaag gtcagaaagg ggactcaggg cttccaccac agccctgccc cacttggcca    180
cctccctttt gggaccagca atgt                                            204


        <210> 52
        <211> 491
        <212> DNA
        <213> Homo sapien


        <220>
        <221> misc_feature
        <222> (1)...(491)
        <223> n = A,T,C or G


        <400> 52
acaaagataa catttatctt ataacaaaaa tttgatagtt ttaaaggtta gtattgtgta      60
gggtattttc caaaagacta aagagataac tcaggtaaaa agttagaaat gtataaaaca    120
ccatcagaca ggttttaaa aaacaacata ttacaaaatt agacaatcat ccttaaaaaa     180
aaaacttctt gtatcaattt cttttgttca aaatgactga cttaantatt tttaaatatt    240
tcanaaacac ttcctcaaaa attttcaana tggtagcttt canatgtncc ctcagtccca    300
atgttgctca gataaataaa tctcgtgaga acttaccacc caccacaagc tttctggggc    360
atgcaacagt gtcttttctt tncttttttct tttttttttt ttacaggcac agaaactcat    420
caattttatt tggataacaa agggtctcca aattatattg aaaaataaat ccaagttaat    480
atcactcttg t                                                          491


        <210> 53
        <211> 484
        <212> DNA
        <213> Homo sapien


        <220>
        <221> misc_feature
        <222> (1)...(484)
        <223> n = A,T,C or G


        <400> 53
acataattta gcagggctaa ttaccataag atgctattta ttaanaggtn tatgatctga      60
gtattaacag ttgctgaagt ttggtatttt tatgcagcat tttcttttttg ctttgataac   120
actacagaac ccttaaggac actgaaaatt agtaagtaaa gttcagaaac attagctgct    180
caatcaaatc tctacataac actatagtaa ttaaaacgtt aaaaaaaagt gttgaaatct    240
gcactagtat anaccgctcc tgtcaggata anactgcttt ggaacagaaa gggaaaaaanc   300
agctttgant ttctttgtgc tgatangagg aaaggctgaa ttaccttgtt gcctctccct    360
aatgattggc aggtcnggta aatnccaaaa catattccaa ctcaacactt cttttccncg    420
tancttgant ctgtgtattc caggancagg cggatggaat gggccagccc ncggatgttc    480
cant                                                                  484


        <210> 54
```

```
        <211> 151
        <212> DNA
        <213> Homo sapien

        <400> 54
actaaacctc gtgcttgtga actccataca gaaaacggtg ccatccctga acacggctgg      60
ccactgggta tactgctgac aaccgcaaca acaaaaacac aaatccttgg cactggctag     120
tctatgtcct ctcaagtgcc tttttgtttg t                                    151


        <210> 55
        <211> 91
        <212> DNA
        <213> Homo sapien

        <400> 55
acctggcttg tctccgggtg gttcccggcg cccccacgg tccccagaac ggacactttc       60
gccctccagt ggatactcga gccaaagtgg t                                     91


        <210> 56
        <211> 133
        <212> DNA
        <213> Homo sapien

        <400> 56
ggcggatgtg cgttggttat atacaaatat gtcattttat gtaagggact tgagtatact      60
tggatttttg gtatctgtgg gttggggga cggtccagga accaataccc catggatacc      120
aagggacaac tgt                                                        133


        <210> 57
        <211> 147
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(147)
        <223> n = A,T,C or G

        <400> 57
actctggaga acctgagccg ctgctccgcc tctgggatga ggtgatgcan gcngtggcgc      60
gactgggagc tgagcccttc cctttgcgcc tgcctcagag gattgttgcc gacntgcana     120
tctcantggg ctggatncat gcagggt                                        147


        <210> 58
        <211> 198
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(198)
        <223> n = A,T,C or G

        <400> 58
acagggatat aggtttnaag ttattgtnat tgtaaaatac attgaatttt ctgtatactc      60
tgattacata catttatcct ttaaaaaaga tgtaaatctt aatttttatg ccatctatta     120
atttaccaat gagttacctt gtaaatgaga agtcatgata gcactgaatt ttaactagtt     180
ttgacttcta agtttggt                                                  198
```

```
        <210> 59
        <211> 330
        <212> DNA
        <213> Homo sapien

        <400> 59
acaacaaatg ggttgtgagg aagtcttatc agcaaaactg gtgatggcta ctgaaaagat        60
ccattgaaaa ttatcattaa tgattttaaa tgacaagtta tcaaaaactc actcaatttt        120
cacctgtgct agcttgctaa aatgggagtt aactctagag caaatatagt atcttctgaa        180
tacagtcaat aaatgacaaa gccagggcct acaggtggtt tccagacttt ccagacccag        240
cagaaggaat ctattttatc acatggatct ccgtctgtgc tcaaaatacc taatgatatt        300
tttcgtcttt attggacttc tttgaagagt                                         330

        <210> 60
        <211> 175
        <212> DNA
        <213> Homo sapien

        <400> 60
accgtgggtg ccttctacat tcctgacggc tccttcacca acatctggtt ctacttcggc        60
gtcgtgggct ccttcctctt catcctcatc cagctggtgc tgctcatcga ctttgcgcac        120
tcctggaacc agcggtggct gggcaaggcc gaggagtgcg attcccgtgc ctggt            175

        <210> 61
        <211> 154
        <212> DNA
        <213> Homo sapien

        <400> 61
accccacttt tcctcctgtg agcagtctgg acttctcact gctacatgat gagggtgagt        60
ggttgttgct cttcaacagt atcctcccct ttccggatct gctgagccgg acagcagtgc        120
tggactgcac agccccgggg ctccacattg ctgt                                    154

        <210> 62
        <211> 30
        <212> DNA
        <213> Homo sapien

        <400> 62
cgctcgagcc ctatagtgag tcgtattaga                                         30

        <210> 63
        <211> 89
        <212> DNA
        <213> Homo sapien

        <400> 63
acaagtcatt tcagcaccct ttgctcttca aaactgacca tcttttatat ttaatgcttc        60
ctgtatgaat aaaaatggtt atgtcaagt                                          89

        <210> 64
        <211> 97
        <212> DNA
        <213> Homo sapien

        <400> 64
accggagtaa ctgagtcggg acgctgaatc tgaatccacc aataaataaa ggttctgcag        60
```

```
aatcagtgca tccaggattg gtccttggat ctggggt                                   97
```

```
        <210> 65
        <211> 377
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(377)
        <223> n = A,T,C or G

        <400> 65
acaacaanaa ntcccttctt taggccactg atggaaacct ggaacccccct tttgatggca        60
gcatggcgtc ctaggccttg acacagcggc tggggtttgg gctntcccaa accgcacacc        120
ccaaccctgg tctacccaca nttctggcta tgggctgtct ctgccactga acatcagggt        180
tcggtcataa natgaaatcc caanggggac agaggtcagt agaggaagct caatgagaaa        240
ggtgctgttt gctcagccag aaaacagctg cctggcattc gccgctgaac tatgaacccg        300
tgggggtgaa ctacccccan gaggaatcat gcctgggcga tgcaanggtg ccaacaggag        360
gggcgggagg agcatgt                                                        377
```

```
        <210> 66
        <211> 305
        <212> DNA
        <213> Homo sapien

        <400> 66
acgcctttcc ctcagaattc agggaagaga ctgtcgcctg ccttcctccg ttgttgcgtg        60
agaacccgtg tgcccccttcc caccatatcc accctcgctc catctttgaa ctcaaacacg        120
aggaactaac tgcaccctgg tcctctcccc agtccccagt tcaccctcca tccctcacct        180
tcctccactc taagggatat caacactgcc cagcacaggg gccctgaatt tatgtggttt        240
ttatatattt tttaataaga tgcactttat gtcatttttt aataaagtct gaagaattac        300
tgttt                                                                     305
```

```
        <210> 67
        <211> 385
        <212> DNA
        <213> Homo sapien

        <400> 67
actacacaca ctccacttgc ccttgtgaga cactttgtcc cagcacttta ggaatgctga        60
ggtcggacca gccacatctc atgtgcaaga ttgcccagca gacatcaggt ctgagagttc        120
cccttttaaa aaaggggact tgcttaaaaa agaagtctag ccacgattgt gtagagcagc        180
tgtgctgtgc tggagattca cttttgagag agttctcctc tgagacctga tctttagagg        240
ctgggcagtc ttgcacatga gatgggctg gtctgatctc agcactcctt agtctgcttg         300
cctctcccag ggccccagcc tggccacacc tgcttacagg gcactctcag atgcccatac        360
catagtttct gtgctagtgg accgt                                               385
```

```
        <210> 68
        <211> 73
        <212> DNA
        <213> Homo sapien

        <400> 68
acttaaccag atatatttt accccagatg gggatattct ttgtaaaaaa tgaaaataaa         60
gttttttaa tgg                                                             73
```

```
        <210> 69
```

26

```
<211> 536
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(536)
<223> n = A,T,C or G

<400> 69
actagtccag tgtggtggaa ttccattgtg ttggggggctc tcaccctcct ctcctgcagc      60
tccagctttg tgctctgcct ctgaggagac catggcccag catctgagta ccctgctgct     120
cctgctggcc accctagctg tggccctggc ctggagcccc aaggaggagg ataggataat     180
cccgggtggc atctataacg cagacctcaa tgatgagtgg gtacagcgtg cccttcactt     240
cgccatcagc gagtataaca aggccaccaa agatgactac tacagacgtc cgctgcgggt     300
actaagagcc aggcaacaga ccgttggggg ggtgaattac ttcttcgacg tagaggtggg     360
ccgaaccata tgtaccaagt cccagcccaa cttggacacc tgtgccttcc atgaacagcc     420
agaactgcag aagaaacagt tgtgctcttt cgagatctac gaagttccct ggggagaaca     480
gaangtccct gggtgaaatc caggtgtcaa gaaatcctan ggatctgttg ccaggc         536


<210> 70
<211> 477
<212> DNA
<213> Homo sapien


<400> 70
atgacccca acaggggccc tctcagccct cctaatgacc tccggcctag ccatgtgatt      60
tcacttccac tccataacgc tcctcatact aggcctacta accaacacac taaccatata     120
ccaatgatgg cgcgatgtaa cacgagaaag cacataccaa ggccaccaca caccacctgt     180
ccaaaaaggc cttcgatacg ggataatcct atttattacc tcagaagttt ttttcttcgc     240
agggattttt ctgagccttt taccactcca gcctagcccc tacccccaa ctaggagggc      300
actggcccc aacaggcatc accccgctaa atccctaga agtcccactc ctaaacacat       360
ccgtattact cgcatcagga gtatcaatca cctgagctca ccatagtcta atagaaaca      420
accgaaacca aattattcaa agcactgctt attacaattt tactgggtct ctatttt         477


<210> 71
<211> 533
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(533)
<223> n = A,T,C or G

<400> 71
agagctatag gtacagtgtg atctcagctt tgcaaacaca ttttctacat agatagtact      60
aggtattaat agatatgtaa agaaagaaat cacaccatta ataatggtaa gattggttta     120
tgtgattta gtggtatttt tggcacccctt atatatgttt tccaaacttt cagcagtgat     180
attatttcca taacttaaaa agtgagtttg aaaaagaaaa tctccagcaa gcatctcatt     240
taaataaagg tttgtcatct ttaaaaatac agcaatatgt gacttttaa aaaagctgtc      300
aaataggtgt gaccctacta ataattatta gaaatacatt taaaaacatc gagtacctca     360
agtcagtttg ccttgaaaaa tatcaaatat aactcttaga gaaatgtaca taaaagaatg     420
cttcgtaatt ttggagtang aggttccctc ctcaattttg tatttttaaa aagtacatgg     480
taaaaaaaaa aattcacaac agtatataag gctgtaaaat gaagaattct gcc            533


<210> 72
<211> 511
```

<220>
<221> misc_feature
<222> (1)...(511)
<223> n = A,T,C or G

<400> 72

```
tattacggaa aaacacacca cataattcaa ctancaaaga anactgcttc agggcgtgta      60
aaatgaaagg cttccaggca gttatctgat taaagaacac taaaagaggg acaaggctaa     120
aagccgcagg atgtctacac tatancaggc gctatttggg ttggctggag gagctgtgga     180
aaacatggan agattggtgc tgganatcgc cgtggctatt cctcattgtt attacanagt     240
gaggttctct gtgtgcccac tggtttgaaa accgttctnc aataatgata gaatagtaca     300
cacatgagaa ctgaaatggc ccaaacccag aaagaaagcc caactagatc ctcagaaanac    360
gcttctaggg acaataaccg atgaagaaaa gatggcctcc ttgtgccccc gtctgttatg     420
atttctctcc attgcagcna naaacccgtt cttctaagca aacncaggtg atgatggcna     480
aaatacaccc cctcttgaag naccnggagg a                                    511
```

<210> 73
<211> 499
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(499)
<223> n = A,T,C or G

<400> 73

```
cagtgccagc actggtgcca gtaccagtac caataacagt gccagtgcca gtgccagcac      60
cagtggtggc ttcagtgctg gtgccagcct gaccgccact ctcacatttg ggctcttcgc     120
tggccttggt ggagctggtg ccagcaccag tggcagctct ggtgcctgtg gtttctccta     180
caagtgagat tttagatatt gttaatcctg ccagtctttc tcttcaagcc agggtgcatc     240
ctcagaaacc tactcaacac agcactctag gcagccacta tcaatcaatt gaagttgaca     300
ctctgcatta aatctatttg ccatttctga aaaaaaaaaa aaaaaaaggg cggccgctcg     360
antctagagg gcccgtttaa acccgctgat cagcctcgac tgtgccttct anttgccagc     420
catctgttgt ttgcccctcc cccgntgcct tccttgaccc tggaaagtgc cactcccact     480
gtcctttcct aantaaaat                                                  499
```

<210> 74
<211> 537
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(537)
<223> n = A,T,C or G

<400> 74

```
tttcatagga gaacacactg aggagatact tgaagaattt ggattcagcc gcgaagagat      60
ttatcagctt aactcagata aaatcattga aagtaataag gtaaaagcta gtctctaact     120
tccaggccca cggctcaagt gaatttgaat actgcattta cagtgtagag taacacataa     180
cattgtatgc atggaaacat ggaggaacag tattacagtg tcctaccact ctaatcaaga     240
aaagaattac agactctgat tctacagtga tgattgaatt ctaaaaatgg taatcattag     300
ggcttttgat ttataanact ttgggtactt atactaaatt atggtagtta tactgccttc     360
cagtttgctt gatatatttg ttgatattaa gattcttgac ttatattttg aatgggttct     420
```

28

```
actgaaaaan gaatgatata ttcttgaaga catcgatata catttattta cactcttgat      480
tctacaatgt agaaatgaa ggaaatgccc caaattgtat ggtgataaaa gtcccgt          537
```

```
        <210> 75
        <211> 467
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(467)
        <223> n = A,T,C or G

        <400> 75
caaanacaat tgttcaaaag atgcaaatga tacactactg ctgcagctca caaacacctc      60
tgcatattac acgtacctcc tcctgctcct caagtagtgt ggtctatttt gccatcatca      120
cctgctgtct gcttagaaga acggctttct gctgcaangg agagaaatca taacagacgg      180
tggcacaagg aggccatctt ttcctcatcg gttattgtcc ctagaagcgt cttctgagga      240
tctagttggg ctttctttct gggtttgggc catttcantt ctcatgtgtg tactattcta      300
tcattattgt ataacggttt tcaaaccngt gggcacncag agaacctcac tctgtaataa      360
caatgaggaa tagccacggt gatctccagc accaaatctc tccatgttnt tccagagctc      420
ctccagccaa cccaaatagc cgctgctatn gtgtagaaca tccctgn                    467
```

```
        <210> 76
        <211> 400
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(400)
        <223> n = A,T,C or G

        <400> 76
aagctgacag cattcgggcc gagatgtctc gctccgtggc cttagctgtg ctcgcgctac      60
tctctctttc tggcctggag gctatccagc gtactccaaa gattcaggtt tactcacgtc      120
atccagcaga gaatggaaag tcaaatttcc tgaattgcta tgtgtctggg tttcatccat      180
ccgacattga agttgactta ctgaagaatg gagagagaat·tgaaaaagtg gagcattcag      240
acttgtcttt cagcaaggac tggtctttct atctcttgta ctacactgaa ttcacccca      300
ctgaaaaaga tgagtatgcc tgccgtgtga accatgtgac tttgtcacag cccaagatng      360
ttnagtggga tcganacatg taagcagcan catgggaggt                           400
```

```
        <210> 77
        <211> 248
        <212> DNA
        <213> Homo sapien

        <400> 77
ctggagtgcc ttggtgtttc aagcccctgc aggaagcaga atgcaccttc tgaggcacct      60
ccagctgccc cggcggggga tgcgaggctc ggagcaccct tgcccggctg tgattgctgc      120
caggcactgt tcatctcagc ttttctgtcc ctttgctccc ggcaagcgct tctgctgaaa      180
gttcatatct ggagcctgat gtcttaacga ataaaggtcc catgctccac ccgaaaaaaa     .240
aaaaaaaa                                                               248
```

```
        <210> 78
        <211> 201
        <212> DNA
        <213> Homo sapien
```

```
        <400> 78
actagtccag tgtggtggaa ttccattgtg ttgggcccaa cacaatggct accttttaaca     60
tcacccagac cccgccctgc ccgtgcccca cgctgctgct aacgacagta tgatgcttac    120
tctgctactc ggaaactatt tttatgtaat taatgtatgc tttcttgttt ataaatgcct    180
gatttaaaaa aaaaaaaaaa a                                               201


        <210> 79
        <211> 552
        <212> DNA
        <213> Homo sapien


        <220>
        <221> misc_feature
        <222> (1)...(552)
        <223> n = A,T,C or G


        <400> 79
tcctttttgtt aggtttttga dacaaccecta dacctaaact gtgtcacaga cttctgaatg     60
tttaggcagt gctagtaatt tcctcgtaat gattctgtta ttactttcct attctttatt    120
cctctttctt ctgaagatta atgaagttga aaattgaggt ggataaatac aaaaaggtag    180
tgtgatagta taagtatcta agtgcagatg aaagtgtgtt atatatatcc attcaaaatt    240
atgcaagtta gtaattactc agggttaact aaattacttt aatatgctgt tgaacctact    300
ctgttccttg gctagaaaaa attataaaca ggactttgtt agtttgggaa gccaaattga    360
taatattcta tgttctaaaa gttgggctat acataaanta tnaagaaata tggaatttta    420
ttcccaggaa tatggggttc atttatgaat antacccggg anagaagttt tgantnaaac    480
cngttttggt taatacgtta atatgtcctn aatnaacaag gcntgactta tttccaaaaa    540
aaaaaaaaaa aa                                                        552


        <210> 80
        <211> 476
        <212> DNA
        <213> Homo sapien


        <220>
        <221> misc_feature
        <222> (1)...(476)
        <223> n = A,T,C or G


        <400> 80
acagggattt gagatgctaa ggccccagag atcgtttgat ccaaccctct tattttcaga     60
ggggaaaatg gggcctagaa gttacagagc atctagctgg tgcgctggca cccctggcct    120
cacacagact cccgagtagc tgggactaca ggcacacagt cactgaagca ggccctgttt    180
gcaattcacg ttgccaccctc caacttaaac attcttcata tgtgatgtcc ttagtcacta    240
aggttaaaact ttcccacccca gaaaaggcaa cttagataaa atcttagagt actttcatac    300
tcttctaagt cctcttccag cctcactttg agtcctcctt ggggggttgat aggaantntc    360
tcttggcttt ctcaataaaa tctctatcca tctcatgttt aatttggtac gcntaaaaat    420
gctgaaaaaa ttaaaatgtt ctggtttcnc tttaaaaaaa aaaaaaaaaa aaaaaa        476


        <210> 81
        <211> 232
        <212> DNA
        <213> Homo sapien


        <220>
        <221> misc_feature
        <222> (1)...(232)
        <223> n = A,T,C or G
```

```
        <400> 81
tttttttttg tatgccntcn ctgtggngtt attgttgctg ccaccctgga ggagcccagt      60
ttcttctgta tctttctttt ctgggggatc ttcctggctc tgcccctcca ttcccagcct     120
ctcatcccca tcttgcactt ttgctagggt tggaggcgct ttcctggtag cccctcagag     180
actcagtcag cgggaataag tcctaggggt gggggtgtg gcaagccggc ct             232


        <210> 82
        <211> 383
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(383)
        <223> n = A,T,C or G


        <400> 82
aggcgggagc agaagctaaa gccaaagccc aagaagagtg gcagtgccag cactggtgcc      60
agtaccagta ccaataacat gccagtgcca gtgccagcac cagtggtggc ttcagtgctg     120
gtgccagcct gaccgccact ctcacatttg ggctcttcgc tggccttggt ggagctggtg     180
ccagcaccag tggcagctct ggtgcctgtg gtttctccta caagtgagat tttagatatt     240
gttaatcctg ccagtctttc tcttcaagcc agggtgcatc ctcagaaacc tactcaacac     300
agcactctng gcagccacta tcaatcaatt gaagttgaca ctctgcatta aatctatttg     360
ccatttcaaa aaaaaaaaaa aaa                                           383


        <210> 83
        <211> 494
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(494)
        <223> n = A,T,C or G


        <400> 83
accgaattgg gaccgctggc ttataagcga tcatgtcctc cagtattacc tcaacgagca      60
gggagatcga gtctatacgc tgaagaaatt tgacccgatg ggacaacaga cctgctcagc     120
ccatcctgct cggttctccc cagatgacaa atactctcga caccgaatca ccatcaagaa     180
acgcttcaag gtgctcatga cccagcaacc gcgccctgtc ctctgagggt ccttaaactg     240
atgtcttttc tgccacctgt tacccctcgg agactccgta accaaactct tcggactgtg     300
agccctgatg cctttttgcc agccatactc tttggcntcc agtctctcgt ggcgattgat     360
tatgcttgtg tgaggcaatc atggtggcat cacccatnaa gggaacacat ttganttttt     420
tttcncatat tttaaattac naccagaata nttcagaata aatgaattga aaaactctta     480
aaaaaaaaaa aaaa                                                     494


        <210> 84
        <211> 380
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(380)
        <223> n = A,T,C or G


        <400> 84
```

```
gctggtagcc tatggcgtgg ccacggangg gctcctgagg cacgggacag tgacttccca      60
agtatcctgc gccgcgtctt ctaccgtccc tacctgcaga tcttcgggca gattccccag     120
gaggacatgg acgtggccct catggagcac agcaactgct cgtcgggagcc cggcttctgg    180
gcacaccctc ctggggccca ggcgggcacc tgcgtctccc agtatgccaa ctggctggtg     240
gtgctgctcc tcgtcatctt cctgctcgtg gccaacatcc tgctggtcac ttgctcattg     300
ccatgttcag ttacacattc ggcaaagtac agggcaacag cnatctctac tgggaaggcc     360
agcgttnccg cctcatccgg                                                 380
```

    <210> 85
    <211> 481
    <212> DNA
    <213> Homo sapien

    <220>
    <221> misc_feature
    <222> (1)...(481)
    <223> n = A,T,C or G

    <400> 85
```
gagttagctc ctccacaacc ttgatgaggt cgtctgcagt ggcctctcgc ttcataccgc      60
tnccatcgtc atactgtagg tttgccacca cctcctgcat cttggggcgg ctaatatcca     120
ggaaactctc aatcaagtca ccgtcnatna aacctgtggc tggttctgtc ttccgctcgg     180
tgtgaaagga tctccagaag gagtgctcga tcttccccac acttttgatg actttattga     240
gtcgattctg catgtccagc aggaggttgt accagctctc tgacagtgag gtcaccagcc     300
ctatcatgcc nttgaacgtg ccgaagaaca ccgagccttg tgtggggggt gnagtctcac     360
ccagattctg cattaccaga nagccgtggc aaaaganatt gacaactcgc ccaggnngaa     420
aaagaacacc tcctggaagt gctngccgct cctcgtccnt tggtggnngc gcntnccttt     480
t                                                                     481
```

    <210> 86
    <211> 472
    <212> DNA
    <213> Homo sapien

    <220>
    <221> misc_feature
    <222> (1)...(472)
    <223> n = A,T,C or G

    <400> 86
```
aacatcttcc tgtataatgc tgtgtaatat cgatccgatn ttgtctgctg agaattcatt      60
acttggaaaa gcaacttnaa gcctggacac tggtattaaa attcacaata tgcaacactt     120
taaacagtgt gtcaatctgc tcccttactt tgtcatcacc agtctgggaa taagggtatg     180
ccctattcac acctgttaaa agggcgctaa gcattttga ttcaacatct ttttttttga      240
cacaagtccg aaaaaagcaa aagtaaacag ttnttaattt gttagccaat tcactttctt     300
catgggacag agccatttga tttaaaaagc aaattgcata atattgagct ttgggagctg     360
atatntgagc ggaagantag cctttctact tcaccagaca caactccttt catattggga     420
tgttnacnaa agttatgtct cttacagatg ggatgctttt gtggcaattc tg            472
```

    <210> 87
    <211> 413
    <212> DNA
    <213> Homo sapien

    <220>
    <221> misc_feature
    <222> (1)...(413)
    <223> n = A,T,C or G

```
        <400> 87
agaaaccagt atctctnaaa acaacctctc ataccttgtg gacctaattt tgtgtgcgtg    60
tgtgtgtgcg cgcatattat atagacaggc acatcttttt tacttttgta aaagcttatg   120
cctctttggt atctatatct gtgaaagttt taatgatctg ccataatgtc ttggggacct   180
ttgtcttctg tgtaaatggt actagagaaa acacctatnt tatgagtcaa tctagttngt   240
tttattcgac atgaaggaaa tttccagatn acaacactna caaactctcc cttgactagg   300
ggggacaaag aaaagcanaa ctgaacatna gaaacaattn cctggtgaga aattncataa   360
acagaaattg ggtngtatat tgaaananng catcattnaa acgttttttt ttt          413


        <210> 88
        <211> 448
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(448)
        <223> n = A,T,C or G


        <400> 88
cgcagcgggt cctctctatc tagctccagc ctctcgcctg ccccactccc cgcgtcccgc    60
gtcctagccn accatggccg ggcccctgcg cgccccgctg ctcctgctgg ccatcctggc   120
cgtggccctg gccgtgagcc ccgcggccgg ctccagtccc ggcaagccgc cgcgcctggt   180
gggaggccca tggaccccgc gtggaagaag aaggtgtgcg gcgtgcactg gactttgccg   240
tcggcnanta caacaaaccc gcaacnactt ttaccnagcn cgcgctgcag gttgtgccgc   300
cccaancaaa ttgttactng gggtaantaa ttcttggaag ttgaacctgg gccaaacnng   360
tttaccagaa ccnagccaat tngaacaatt nccctccat aacagcccct tttaaaaagg    420
gaancantcc tgntcttttc caaatttt                                      448


        <210> 89
        <211> 463
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(463)
        <223> n = A,T,C or G


        <400> 89
gaattttgtg cactggccac tgtgatggaa ccattgggcc aggatgcttt gagtttatca    60
gtagtgattc tgccaaagtt ggtgttgtaa catgagtatg taaaatgtca aaaaattagc   120
agaggtctag gtctgcatat cagcagacag tttgtccgtg tattttgtag ccttgaagtt   180
ctcagtgaca agttnnttct gatgcgaagt tctnattcca gtgttttagt cctttgcatc   240
tttnatgttn agacttgcct ctntnaaatt gcttttgtnt tctgcaggta ctatctgtgg   300
tttaacaaaa tagaannact tctctgcttn gaanatttga atatcttaca tctnaaaatn   360
aattctctcc ccatannaaa acccangccc ttggganaat ttgaaaaang gntccttcnn   420
aattcnnana anttcagntn tcatacaaca naacnggganc ccc                    463


        <210> 90
        <211> 400
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(400)
```

```
        <223> n = A,T,C or G

        <400> 90
aggggattgaa ggtctnttnt actgtcggac tgttcancca ccaactctac aagttgctgt      60
cttccactca ctgtctgtaa gcntnttaac ccagactgta tcttcataaa tagaacaaat     120
tcttcaccag tcacatcttc taggaccttt ttggattcag ttagtataag ctcttccact     180
tcctttgtta agacttcatc tggtaaagtc ttaagttttg tagaaaggaa tttaattgct     240
cgttctctaa caatgtcctc tccttgaagt atttggctga acaacccacc tnaagtccct     300
ttgtgcatcc attttaaata tacttaatag ggcattggtn cactaggtta aattctgcaa     360
gagtcatctg tctgcaaaag ttgcgttagt atatctgcca                           400

        <210> 91
        <211> 480
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(480)
        <223> n = A,T,C or G

        <400> 91
gagctcggat ccaataatct ttgtctgagg gcagcacaca tatncagtgc catggnaact      60
ggtctacccc acatgggagc agcatgccgt agntatataa ggtcattccc tgagtcagac     120
atgcctcttt gactaccgtg tgccagtgct ggtgattctc acacacctcc nnccgctctt     180
tgtggaaaaa ctggcacttg nctggaacta gcaagacatc acttacaaat tcacccacga     240
gacacttgaa aggtgtaaca aagcgactct tgcattgctt tttgtccctc cggcaccagt     300
tgtcaatact aacccgctgg tttgcctcca tcacatttgt gatctgtagc tctggataca     360
tctcctgaca gtactgaaga acttcttctt ttgtttcaaa agcaactctt ggtgcctgtt     420
ngatcaggtt cccatttccc agtccgaatg ttcacatggc atatnttact tcccacaaaa     480

        <210> 92
        <211> 477
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(477)
        <223> n = A,T,C or G

        <400> 92
atacagccca natcccacca cgaagatgcg cttgttgact gagaacctga tgcggtcact      60
ggtcccgctg tagccccagc gactctccac ctgctggaag cggttgatgc tgcactcctt     120
cccacgcagg cagcagcggg gccggtcaat gaactccact cgtggcttgg ggttgacggt     180
taantgcagg aagaggctga ccacctcgcg gtccaccagg atgcccgact gtgcgggacc     240
tgcagcgaaa ctcctcgatg gtcatgagcg ggaagcgaat gangcccagg gccttgccca     300
gaaccttccg cctgttctct ggcgtcacct gcagctgctg ccgctacac tcggcctcgg     360
accagcggac aaacggcgtt gaacagccgc acctcacgga tgcccantgt gtcgcgctcc     420
aggaacggcn ccagcgtgtc caggtcaatg tcggtgaanc ctccgcgggt aatggcg       477

        <210> 93
        <211> 377
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
```

34

```
      <222> (1)...(377)
      <223> n = A,T,C or G

      <400> 93
gaacggctgg accttgcctc gcattgtgct gctggcagga ataccttggc aagcagctcc    60
agtccgagca gccccagacc gctgccgccc gaagctaagc ctgcctctgg ccttcccctc   120
cgcctcaatg cagaaccant agtgggagca ctgtgtttag agttaagagt gaacactgtn   180
tgattttact tgggaatttc ctctgttata tagcttttcc caatgctaat ttccaaacaa   240
caacaacaaa ataacatgtt tgcctgttna gttgtataaa agtangtgat tctgtatnta   300
aagaaaatat tactgttaca tatactgctt gcaanttctg tatttattgg tnctctggaa   360
ataaatatat tattaaa                                                   377


      <210> 94
      <211> 495 .
      <212> DNA
      <213> Homo sapien


      <220>
      <221> misc_feature
      <222> (1)...(495)
      <223> n = A,T,C or G


      <400> 94
ccctttgagg ggttagggtc cagttcccag tggaagaaac aggccaggag aantgcgtgc    60
cgagctgang cagatttccc acagtgaccc cagagccctg ggctatagtc tctgaccct   120
ccaaggaaag accacctict ggggacatgg gctggagggc aggacctaga ggcaccaagg   180
gaaggcccca ttccgggggct gttccccgag gaggaaggga aggggctctg tgtgcccccc   240
acgaggaana ggccctgant cctgggatca nacacccctt cacgtgtatc cccacacaaa   300
tgcaagctca ccaaggtccc ctctcagtcc cttccctaca ccctgaacgg ncactggccc   360
acacccaccc agancancca cccgccatgg ggaatgtnct caaggaatcg cngggcaacg   420
tggactctng tcccnnaagg gggcagaatc tccaatagan gganngaacc cttgctnana   480
aaaaaaaana aaaaa                                                     495


      <210> 95
      <211> 472
      <212> DNA
      <213> Homo sapien


      <220>
      <221> misc_feature
      <222> (1)...(472)
      <223> n = A,T,C or G


      <400> 95
ggttacttgg tttcattgcc accacttagt ggatgtcatt tagaaccatt ttgtctgctc    60
cctctggaag ccttgcgcag agcggacttt gtaattgttg gagaataact gctgaatttt   120
tagctgtttt gagttgattc gcaccactgc accacaactc aatatgaaaa ctatttnact   180
tatttattat cttgtgaaaa gtatacaatg aaaatttttgt tcatactgta tttatcaagt   240
atgatgaaaa gcaatagata tatattcttt tattatgttn aattatgatt gccattatta   300
atcggcaaaa tgtggagtgt atgttctttt cacagtaata tatgccttttt gtaacttcac   360
ttggttattt tattgtaaat gaattacaaa attcttaatt taagaaaatg gtangttata   420
tttanttcan taatttctttt ccttgtttac gttaattttttg aaaagaatgc at         472


      <210> 96
      <211> 476
      <212> DNA
      <213> Homo sapien
```

35

```
      <220>
      <221> misc_feature
      <222> (1)...(476)
      <223> n = A,T,C or G

      <400> 96
ctgaagcatt tcttcaaact tntctacttt tgtcattgat acctgtagta agttgacaat    60
gtggtgaaat ttcaaaatta tatgtaactt ctactagttt tactttctcc cccaagtctt   120
ttttaactca tgatttttac acacacaatc cagaacttat tatatagcct ctaagtcttt   180
attcttcaca gtagatgatg aaagagtcct ccagtgtctt gngcanaatg ttctagntat   240
agctggatac atacngtggg agttctataa actcatacct cagtgggact naaccaaaat   300
tgtgttagtc tcaattccta ccacactgag ggagcctccc aaatcactat attcttatct   360
gcaggtactc ctccagaaaa acngacaggg caggcttgca tgaaaaagtn acatctgcgt   420
tacaaagtct atcttcctca nangtctgtn aaggaacaat ttaatcttct agcttt       476


      <210> 97
      <211> 479
      <212> DNA
      <213> Homo sapien

      <220>
      <221> misc_feature
      <222> (1)...(479)
      <223> n = A,T,C or G

      <400> 97
actctttcta atgctgatat gatcttgagt ataagaatgc atatgtcact agaatggata    60
aaataatgct gcaaacttaa tgttcttatg caaaatggaa cgctaatgaa acacagctta   120
caatcgcaaa tcaaaactca caagtgctca tctgttgtag atttagtgta ataagactta   180
gattgtgctc cttcggatat gattgtttct canatcttgg gcaatnttcc ttagtcaaat   240
caggctacta gaattctgtt attggatatn tgagagcatg aaatttttaa naatacactt   300
gtgattatna aattaatcac aaatttcact tatacctgct atcagcagct agaaaaacat   360
ntnnttttta natcaaagta ttttgtgttt ggaantgtnn aaatgaaatc tgaatgtggg   420
ttcnatctta ttttttcccn gacnactant tnctttttta gggnctattc tganccatc   479


      <210> 98
      <211> 461
      <212> DNA
      <213> Homo sapien

      <400> 98
agtgacttgt cctccaacaa aacccccttga tcaagtttgt ggcactgaca atcagaccta   60
tgctagttcc tgtcatctat tcgctactaa atgcagactg gaggggacca aaaaggggca   120
tcaactccag ctggattatt ttggagcctg caaatctatt cctacttgta cggactttga   180
agtgattcag tttcctctac ggatgagaga ctggctcaag aatatcctca tgcagctttа   240
tgaagccact ctgaacacgc tggttatcta gatgagaaca gagaaataaa gtcagaaaat   300
ttacctggag aaaagaggct ttggctgggg accatcccat tgaaccttct cttaaggact   360
ttaagaaaaa ctaccacatg ttgtgtatcc tggtgccggc cgtttatgaa ctgaccaccc   420
tttggaataa tcttgacgct cctgaacttg ctcctctgcg a                       461


      <210> 99
      <211> 171
      <212> DNA
      <213> Homo sapien

      <400> 99
gtggccgcgc gcaggtgttt cctcgtaccg cagggccccc tcccttcccc aggcgtccct    60
cggcgcctct gcgggcccga ggaggagcgg ctggcgggtg gggggagtgt gacccaccct   120
```

```
cggtgagaaa agccttctct agcgatctga gaggcgtgcc ttgggggtac c              171
```

```
        <210> 100
        <211> 269
        <212> DNA
        <213> Homo sapien

        <400> 100
cggccgcaag tgcaactcca gctggggccg tgcggacgaa gattctgcca gcagttggtc      60
cgactgcgac gacggcggcg gcgacagtcg caggtgcagc gcgggcgcct ggggtcttgc     120
aaggctgagc tgacgccgca gaggtcgtgt cacgtcccac gaccttgacg ccgtcgggga     180
cagccggaac agagcccggt gaagcgggag gcctcgggga gccctcgggg aagggcggcc     240
cgagagatac gcaggtgcag gtggccgcc                                       269
```

```
        <210> 101
        <211> 405
        <212> DNA
        <213> Homo sapien

        <400> 101
tttttttttt ttttggaatc tactgcgagc acagcaggtc agcaacaagt ttattttgca      60
gctagcaagg taacagggta gggcatggtt acatgttcag gtcaacttcc tttgtcgtgg     120
ttgattggtt tgtctttatg ggggcggggt ggggtagggg aaacgaagca aataacatgg     180
agtgggtgca ccctccctgt agaacctggt tacaaagctt ggggcagttc acctggtctg     240
tgaccgtcat tttcttgaca tcaatgttat tagaagtcag gatatctttt agagagtcca     300
ctgttctgga gggagattag ggtttcttgc caaatccaac aaaatccact gaaaaagttg     360
gatgatcagt acgaataccg aggcatattc tcatatcggt ggcca                     405
```

```
        <210> 102
        <211> 470
        <212> DNA
        <213> Homo sapien

        <400> 102
tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt      60
ggcacttaat ccatttttat ttcaaaatgt ctacaaattt aatcccatta tacggtattt     120
tcaaaatcta aattattcaa attagccaaa tccttaccaa ataatacccca aaaatcaaaa     180
atatacttct ttcagcaaac ttgttacata aattaaaaaa atatatacgg ctggtgtttt     240
caaagtacaa ttatcttaac actgcaaaca ttttaaggaa ctaaaataaa aaaaaacact     300
ccgcaaaggt taaagggaac aacaaattct tttacaacac cattataaaa atcatatctc     360
aaatcttagg ggaatatata cttcacacgg gatcttaact tttactcact ttgtttattt     420
ttttaaacca ttgtttgggc ccaacacaat ggaatccccc ctggactagt                 470
```

```
        <210> 103
        <211> 581
        <212> DNA
        <213> Homo sapien

        <400> 103
tttttttttt tttttttttga cccccctctt ataaaaaaca agttaccatt ttattttact      60
tacacatatt tattttataa ttggtattag atattcaaaa ggcagctttt aaaatcaaac     120
taaatggaaa ctgccttaga tacataattc ttaggaatta gcttaaaatc tgcctaaagt     180
gaaaatcttc tctagctctt ttgactgtaa attttttgact cttgtaaaac atccaaattc     240
attttttcttg tctttaaaat tatctaatct ttccattttt tccctattcc aagtcaattt     300
gcttctctag cctcatttcc tagctcttat ctactattag taagtggctt ttttcctaaa     360
agggaaaaca ggaagagaaa tggcacacaa aacaaacatt ttatattcat atttctacct     420
acgttaataa aatagcattt tgtgaagcca gctcaaaaga aggcttagat cctttttatgt     480
ccatttttagt cactaaacga tatcaaagtg ccagaatgca aaaggtttgt gaacatttat     540
```

```
tcaaaagcta atataagata tttcacatac tcatctttct g                     581

     <210> 104
     <211> 578
     <212> DNA
     <213> Homo sapien

     <400> 104
ttttttttt tttttttttt ttttttctctt cttttttttt gaaatgagga tcgagttttt    60
cactctctag atagggcatg aagaaaactc atctttccag ctttaaaata acaatcaaat   120
ctcttatgct atatcatatt ttaagttaaa ctaatgagtc actggcttat cttctcctga   180
aggaaatctg ttcattcttc tcattcatat agttatatca agtactacct tgcatattga   240
gaggttttc ttctctatttt acacatatat ttccatgtga atttgtatca aacctttatt    300
ttcatgcaaa ctagaaaata atgtttcttt tgcataagag aagagaacaa tatagcatta   360
caaaactgct caaattgttt gttaagttat ccattataat tagttggcag gagctaatac   420
aaatcacatt tacgacagca ataataaaac tgaagtacca gttaaatatc caaaataatt   480
aaaggaacat ttttagcctg ggtataatta gctaattcac cttacaagca tttattagaa   540
tgaattcaca tgttattatt cctagcccaa cacaatgg                          578

     <210> 105
     <211> 538
     <212> DNA
     <213> Homo sapien

     <400> 105
ttttttttt tttttcagta ataatcagaa caatatttat ttttatattt aaaattcata    60
gaaaagtgcc ttacatttaa taaaagtttg tttctcaaag tgatcagagg aattagatat   120
gtcttgaaca ccaatattaa tttgaggaaa atacaccaaa atacattaag taaattatttt   180
aagatcatag agcttgtaag tgaaaagata aaatttgacc tcagaaactc tgagcattaa   240
aaatccacta ttagcaaata aattactatg gacttcttgc tttaattttg tgatgaatat   300
ggggtgtcac tggtaaacca acacattctg aaggatacat tacttagtga tagattctta   360
tgtactttgc taatacgtgg atatgagttg acaagtttct ctttcttcaa tcttttaagg   420
ggcgagaaat gaggaagaaa agaaaaggat tacgcatact gttctttcta tggaaggatt   480
agatatgttt cctttgccaa tattaaaaaa ataataatgt ttactactag tgaaaccc     538

     <210> 106
     <211> 473
     <212> DNA
     <213> Homo sapien

     <400> 106
ttttttttt tttttttagtc aagtttctat ttttattata attaaagtct tggtcatttc    60
atttattagc tctgcaactt acatatttaa attaaagaaa cgttttagac aactgtacaa   120
tttataaatg taaggtgcca ttattgagta atatattcct ccaagagtgg atgtgtccct   180
tctcccacca actaatgaac agcaacatta gtttaatttt attagtagat atacactgct   240
gcaaacgcta attctcttct ccatccccat gtgatattgt gtatatgtgt gagttggtag   300
aatgcatcac aatctacaat caacagcaag atgaagctag gctgggcttt cggtgaaaat   360
agactgtgtc tgtctgaatc aaatgatctg acctatcctc ggtggcaaga actcttcgaa   420
ccgcttcctc aaaggcgctg ccacatttgt ggctctttgc acttgtttca aaa           473

     <210> 107
     <211> 1621
     <212> DNA
     <213> Homo sapien

     <400> 107
cgccatggca ctgcagggca tctcggtcat ggagctgtcc ggcctggccc cgggcccgtt    60
ctgtgctatg gtcctggctg acttcggggc gcgtgtggta cgcgtggacc ggcccggctc   120
```

38

```
ccgctacgac gtgagccgct tgggccgggg caagcgctcg ctagtgctgg acctgaagca    180
gccgcgggga gccgccgtgc tgcggcgtct gtgcaagcgg tcggatgtgc tgctggagcc    240
cttccgccgc ggtgtcatgg agaaactcca gctgggccca gagattctgc agcgggaaaa    300
tccaaggctt atttatgcca ggctgagtgg atttggccag tcaggaagct tctgccggtt    360
agctggccac gatatcaact atttggcttt gtcaggtgtt ctctcaaaaa ttggcagaag    420
tggtgagaat ccgtatgccc cgctgaatct cctggctgac tttgctggtg gtggccttat    480
gtgtgcactg ggcattataa tggctctttt tgaccgcaca cgcactgaca agggtcaggt    540
cattgatgca aatatggtgg aaggaacagc atatttaagt tcttttctgt ggaaaactca    600
gaaatcgagt ctgtgggaag cacctcgagg acagaacatg ttggatggtg gagcaccttt    660
ctatacgact tacaggacag cagatgggga attcatggct gttggagcaa tagaacccca    720
gttctacgag ctgctgatca aaggacttgg actaaagtct gatgaacttc ccaatcagat    780
gagcatggat gattggccag aaatgaagaa gaagtttgca gatgtatttg caaagaagac    840
gaaggcagag tggtgtcaaa tctttgacgg cacagatgcc tgtgtgactc cggttctgac    900
tttttgaggag gttgttcatc atgatcacaa caaggaacgg ggctcgttta tcaccagtga    960
ggagcaggac gtgagccccc gccctgcacc tctgctgtta aacaccccag ccatcccttc   1020
tttcaaaagg gatcctttca taggagaaca cactgaggag atacttgaag aatttggatt   1080
cagccgcgaa gagatttatc agcttaactc agataaaatc attgaaagta ataaggtaaa   1140
agctagtctc taacttccag gcccacggct caagtgaatt tgaatactgc atttacagtg   1200
tagagtaaca cataacattg tatgcatgga aacatggagg aacagtatta cagtgtccta   1260
ccactctaat caagaaaaga attacagact ctgattctac agtgatgatt gaattctaaa   1320
aatggttatc attagggctt ttgatttata aaactttggg tacttatact aaattatggt   1380
agttattctg ccttccagtt tgcttgatat atttgttgat attaagattc ttgacttata   1440
ttttgaatgg gttctagtga aaaaggaatg atatattctt gaagacatcg atatacattt   1500
atttacactc ttgattctac aatgtagaaa atgaggaaat gccacaaatt gtatggtgat   1560
aaaagtcacg tgaaacaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa   1620
a                                                                    1621
```

```
        <210> 108
        <211> 382
        <212> PRT
        <213> Homo sapien

        <400> 108
Met Ala Leu Gln Gly Ile Ser Val Met Glu Leu Ser Gly Leu Ala Pro
1               5                  10                  15
Gly Pro Phe Cys Ala Met Val Leu Ala Asp Phe Gly Ala Arg Val Val
            20                  25                  30
Arg Val Asp Arg Pro Gly Ser Arg Tyr Asp Val Ser Arg Leu Gly Arg
        35                  40                  45
Gly Lys Arg Ser Leu Val Leu Asp Leu Lys Gln Pro Arg Gly Ala Ala
    50                  55                  60
Val Leu Arg Arg Leu Cys Lys Arg Ser Asp Val Leu Leu Glu Pro Phe
65                  70                  75                  80
Arg Arg Gly Val Met Glu Lys Leu Gln Leu Gly Pro Glu Ile Leu Gln
                85                  90                  95
Arg Glu Asn Pro Arg Leu Ile Tyr Ala Arg Leu Ser Gly Phe Gly Gln
            100                 105                 110
Ser Gly Ser Phe Cys Arg Leu Ala Gly His Asp Ile Asn Tyr Leu Ala
        115                 120                 125
Leu Ser Gly Val Leu Ser Lys Ile Gly Arg Ser Gly Glu Asn Pro Tyr
    130                 135                 140
Ala Pro Leu Asn Leu Leu Ala Asp Phe Ala Gly Gly Gly Leu Met Cys
145                 150                 155                 160
Ala Leu Gly Ile Ile Met Ala Leu Phe Asp Arg Thr Arg Thr Asp Lys
                165                 170                 175
Gly Gln Val Ile Asp Ala Asn Met Val Glu Gly Thr Ala Tyr Leu Ser
            180                 185                 190
Ser Phe Leu Trp Lys Thr Gln Lys Ser Ser Leu Trp Glu Ala Pro Arg
```

```
                     195                    200                    205
Gly Gln Asn Met Leu Asp Gly Gly Ala Pro Phe Tyr Thr Thr Tyr Arg
        210                    215                    220
Thr Ala Asp Gly Glu Phe Met Ala Val Gly Ala Ile Glu Pro Gln Phe
225                    230                    235                    240
Tyr Glu Leu Leu Ile Lys Gly Leu Gly Leu Lys Ser Asp Glu Leu Pro
                245                    250                    255
Asn Gln Met Ser Met Asp Asp Trp Pro Glu Met Lys Lys Lys Phe Ala
                260                    265                    270
Asp Val Phe Ala Lys Lys Thr Lys Ala Glu Trp Cys Gln Ile Phe Asp
        275                    280                    285
Gly Thr Asp Ala Cys Val Thr Pro Val Leu Thr Phe Glu Glu Val Val
        290                    295                    300
His His Asp His Asn Lys Glu Arg Gly Ser Phe Ile Thr Ser Glu Glu
305                    310                    315                    320
Gln Asp Val Ser Pro Arg Pro Ala Pro Leu Leu Leu Asn Thr Pro Ala
                325                    330                    335
Ile Pro Ser Phe Lys Arg Asp Pro Phe Ile Gly Glu His Thr Glu Glu
                340                    345                    350
Ile Leu Glu Glu Phe Gly Phe Ser Arg Glu Glu Ile Tyr Gln Leu Asn
        355                    360                    365
Ser Asp Lys Ile Ile Glu Ser Asn Lys Val Lys Ala Ser Leu
        370                    375                    380
```



```
<210> 109
<211> 1524
<212> DNA
<213> Homo sapien

<400> 109
ggcacgaggc tgcgccaggg cctgagcgga ggcggggggca gcctcgccag cgggggcccc      60
gggcctggcc atgcctcact gagccagcgc ctgcgcctct acctcgccga cagctggaac     120
cagtgcgacc tagtggctct cacctgcttc ctcctgggcg tgggctgccg gctgaccccg     180
ggtttgtacc acctgggccg cactgtcctc tgcatcgact tcatggtttt cacggtgcgg     240
ctgcttcaca tcttcacggt caacaaacag ctggggccca agatcgtcat cgtgagcaag     300
atgatgaagg acgtgttctt cttcctcttc ttcctcggcg tgtggctggt agcctatggc     360
gtggccacgg aggggctcct gaggccacgg gacagtgact tcccaagtat cctgcgccgc     420
gtcttctacc gtccctacct gcagatcttc gggcagattc cccaggagga catggacgtg     480
gccctcatgg agcacagcaa ctgctcgtcg gagcccggct tctgggcaca ccctcctggg     540
gcccaggcgg cacctgcgt ctcccagtat gccaactggc tggtggtgct gctcctcgtc      600
atcttcctgc tcgtggccaa catcctgctg gtcaacttgc tcattgccat gttcagttac     660
acattcggca agtacagggg caacagcgat ctctactgga aggcgcagcg ttaccgcctc     720
atccgggaat tccactctcg gcccgcgctg gccccgccct ttatcgtcat ctcccacttg     780
cgcctcctgc tcaggcaatt gtgcaggcga ccccggagcc cccagccgtc ctccccggcc     840
ctcgagcatt tccgggttta cctttctaag gaagccgagc ggaagctgct aacgtgggaa     900
tcggtgcata aggagaactt tctgctggca cgcgctaggg acaagcggga gagcgactcc     960
gagcgtctga agcgcacgtc ccagaaggtg gacttggcac tgaaacagct gggacacatc    1020
cgcgagtacg aacagcgcct gaaagtgctg gagcgggagg tccagcagtg tagccgcgtc    1080
ctggggtggg tggccgaggc cctgagccgc tctgccttgc tgcccccagg tgggccgcca    1140
ccccctgacc tgcctgggtc caaagactga gccctgctgg cggacttcaa ggagaagccc    1200
ccacagggga ttttgctcct agagtaaggc tcatctgggc ctcggccccc gcacctggtg    1260
gccttgtcct tgaggtgagc cccatgtcca tctgggccac tgtcaggacc accttggga     1320
gtgtcatcct tacaaaccac agcatgcccg gctcctccca gaaccagtcc cagcctggga    1380
ggatcaaggc ctggatcccg ggccgttatc catctggagg ctgcagggtc cttggggtaa    1440
cagggaccac agacccctca ccactcacag attcctcaca ctggggaaat aaagccattt    1500
cagaggaaaa aaaaaaaaaa aaaa                                           1524
```

                                                         `<210> 110`

<211> 3410
<212> DNA
<213> Homo sapien

<400> 110
```
gggaaccagc ctgcacgcgc tggctccggg tgacagccgc gcgcctcggc caggatctga      60
gtgatgagac gtgtccccac tgaggtgccc cacagcagca ggtgttgagc atgggctgag     120
aagctggacc ggcaccaaag ggctggcaga aatgggcgcc tggctgattc ctaggcagtt     180
ggcggcagca aggaggagag gccgcagctt ctggagcaga gccgagacga agcagttctg     240
gagtgcctga acggcccect gagccctacc cgcctggccc actatggtcc agaggctgtg     300
ggtgagccgc ctgctgcggc accggaaagc ccagctcttg ctggtcaacc tgctaacctt     360
tggcctggag gtgtgtttgg ccgcaggcat cacctatgtg ccgcctctgc tgctggaagt     420
gggggtagag gagaagttca tgaccatggt gctgggcatt ggtccagtgc tgggcctggt     480
ctgtgtcccg ctcctaggct cagccagtga ccactggcgt ggacgctatg gccgccgccg     540
gcccttcatc tgggcactgt ccttgggcat cctgctgagc ctctttctca tcccaagggc     600
cggctggcta gcagggctgc tgtgcccgga tcccaggccc ctggagctgg cactgctcat     660
cctgggcgtg gggctgctgg acttctgtgg ccaggtgtgc ttcactccac tggaggccct     720
gctctctgac ctcttccggg acccggacca ctgtcgccag gcctactctg tctatgcctt     780
catgatcagt cttgggggct gcctgggcta cctcctgcct gccattgact gggacaccag     840
tgccctggcc ccctacctgg gcacccagga ggagtgcctc tttggcctgc tcaccctcat     900
cttcctcacc tgcgtagcag ccacactgct ggtggctgag gaggcagcgc tgggccccac     960
cgagccagca gaagggctgt cggcccectc cttgtcgccc cactgctgtc catgccgggc    1020
ccgcttggct ttccggaacc tgggcgccct gcttccccgg ctgcaccagc tgtgctgccg    1080
catgccccgc accctgcgcc ggctcttcgt ggctgagctg tgcagctgga tggcactcat    1140
gaccttcacg ctgttttaca cggatttcgt gggcgagggg ctgtaccagg cgtgcccag     1200
agctgagccg ggcaccgagg cccggagaca ctatgatgaa ggcgttcgga tgggcagcct    1260
ggggctgttc ctgcagtgcg ccatctccct ggtcttctct ctggtcatgg accggctggt    1320
gcagcgattc ggcactcgag cagtctattt ggccagtgtg gcagctttcc ctgtggctgc    1380
cggtgccaca tgcctgtccc acagtgtggc cgtggtgaca gcttcagccg ccctcaccgg    1440
gttcaccttc tcagccctgc agatcctgcc ctacacactg gcctccctct accaccggga    1500
gaagcaggtg ttcctgccca aataccgagg ggacactgga ggtgctagca gtgaggacag    1560
cctgatgacc agcttcctgc caggccctaa gcctggagct cccttcccta atggacacgt    1620
gggtgctgga ggcagtggcc tgctcccacc tccacccgcg ctctgcgggg cctctgcctg    1680
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atccctgttt atgggctcca ttgtccagct cagccagtct gtcactgcct atatggtgtc    1860
tgccgcaggc ctgggtctgg tcgccatttt actttgctaca caggtagtat ttgacaagag    1920
cgacttggcc aaatactcag cgtagaaaac ttccagcaca ttggggtgga gggcctgcct    1980
cactgggtcc cagctccccg ctcctgttag ccccatgggg ctgccgggct ggccgccagt    2040
ttctgttgct gccaaagtaa tgtggctctc tgctgccacc ctgtgctgct gaggtgcgta    2100
gctgcacagc tggggggctgg ggcgtccctc tcctctctcc ccagtctcta gggctgcctg    2160
actggaggcc ttccaagggg gtttcagtct ggacttatac agggaggcca gaagggctcc    2220
atgcactgga atgcggggac tctgcaggtg gattacccag gctcagggtt aacagctagc    2280
ctcctagttg agacacacct agagaagggt ttttgggagc tgaataaact cagtcacctg    2340
gtttcccatc tctaagcccc ttaacctgca gcttcgttta atgtagctct tgcatgggag    2400
tttctaggat gaaacactcc tccatgggat ttgaacatat gacttatttg taggggaaga    2460
gtcctgaggg gcaacacaca agaaccaggt cccctcagcc cacagcactg tctttttgct    2520
gatccacccc cctcttacct tttatcagga tgtggcctgt tggtccttct gttgccatca    2580
cagagacaca ggcatttaaa tatttaactt atttatttaa caaagtagaa gggaatccat    2640
tgctagcttt tctgtgttgg tgtctaatat ttgggtaggg tggggatcc ccaacaatca     2700
ggtcccctga gatagctggt cattgggctg atcattgcca gaatcttctt ctcctggggt    2760
ctggcccccc aaaatgccta acccaggacc ttggaaattc tactcatccc aaatgataat    2820
tccaaatgct gttacccaag gttagggtgt tgaaggaagg tagagggtgg ggcttcaggt    2880
ctcaacggct tccctaacca ccectcttct cttggcccag cctggttccc cccacttcca    2940
ctcccctcta ctctctctag gactgggctg atgaaggcac tgcccaaaat ttcccctacc    3000
cccaacttc ccctacccce aactttcccc accagctcca caacctgtt tggagctact     3060
gcaggaccag aagcacaaag tgcggtttcc caagcctttg tccatctcag cccccagagt    3120
atatctgtgc ttggggaatc tcacacagaa actcaggagc acccctgcc tgagctaagg    3180
```

```
gaggtcttat ctctcagggg gggtttaagt gccgtttgca ataatgtcgt cttatttatt    3240
tagcggggtg aatattttat actgtaagtg agcaatcaga gtataatgtt tatggtgaca    3300
aaattaaagg ctttcttata tgtttaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa    3360
aaaaaaaara aaaaaaaaaa aaaaaaaaaa aaaaaaataa aaaaaaaaaa               3410
```

        <210> 111
        <211> 1289
        <212> DNA
        <213> Homo sapien

        <400> 111
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agccaggcgt ccctctgcct gcccactcag tggcaacacc cgggagctgt tttgtccttt      60
gtggagcctc agcagttccc tctttcagaa ctcactgcca agagccctga acaggagcca     120
ccatgcagtg cttcagcttc attaagacca tgatgatcct cttcaatttg ctcatctttc     180
tgtgtggtgc agccctgttg gcagtgggca tctgggtgtc aatcgatggg gcatcctttc     240
tgaagatctt cgggccactg tcgtccagtg ccatgcagtt tgtcaacgtg ggctacttcc     300
tcatcgcagc cggcgttgtg gtctttgctc ttggtttcct gggctgctat ggtgctaaga     360
ctgagagcaa gtgtgccctc gtgacgttct tcttcatcct cctcctcatc ttcattgctg     420
aggttgcagc tgctgtggtc gccttggtgt acaccacaat ggctgagcac ttcctgacgt     480
tgctggtagt gcctgccatc aagaaagatt atggttccca ggaagacttc actcaagtgt     540
ggaacaccac catgaaaggg ctcaagtgct gtggcttcac caactatacg gattttgagg     600
actcacccta cttcaaagag aacagtgcct tcccccatt ctgttgcaat gacaacgtca     660
ccaacacagc caatgaaacc tgcaccaagc aaaaggctca cgaccaaaaa gtagagggtt     720
gcttcaatca gcttttgtat gacatccgaa ctaatgcagt caccgtgggt ggtgtggcag     780
ctggaattgg gggcctcgag ctggctgcca tgattgtgtc catgtatctg tactgcaatc     840
tacaataagt ccacttctgc ctctgccact actgctgcca catgggaact gtgaagaggc     900
accctggcaa gcagcagtga ttgggggagg ggacaggatc taacaatgtc acttgggcca     960
gaatggacct gccctttctg ctccagactt ggggctagat agggaccact cctttagcg    1020
atgcctgact ttccttccat tggtgggtgg atgggtgggg ggcattccag agcctctaag    1080
gtagccagtt ctgttgccca ttcccccagt ctattaaacc cttgatatgc ccccctaggcc    1140
tagtggtgat cccagtgctc tactggggga tgagagaaag gcattttata gcctgggcat    1200
aagtgaaatc agcagagcct ctgggtggat gtgtagaagg cacttcaaaa tgcataaacc    1260
tgttacaatg ttaaaaaaaa aaaaaaaaa                                      1289
```

        <210> 112
        <211> 315
        <212> PRT
        <213> Homo sapien

        <400> 112
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Met Val Phe Thr Val Arg Leu Leu His Ile Phe Thr Val Asn Lys Gln
1               5                   10                  15
Leu Gly Pro Lys Ile Val Ile Val Ser Lys Met Met Lys Asp Val Phe
            20                  25                  30
Phe Phe Leu Phe Phe Leu Gly Val Trp Leu Val Ala Tyr Gly Val Ala
        35                  40                  45
Thr Glu Gly Leu Leu Arg Pro Arg Asp Ser Asp Phe Pro Ser Ile Leu
    50                  55                  60
Arg Arg Val Phe Tyr Arg Pro Tyr Leu Gln Ile Phe Gly Gln Ile Pro
65                  70                  75                  80
Gln Glu Asp Met Asp Val Ala Leu Met Glu His Ser Asn Cys Ser Ser
                85                  90                  95
Glu Pro Gly Phe Trp Ala His Pro Pro Gly Ala Gln Ala Gly Thr Cys
            100                 105                 110
Val Ser Gln Tyr Ala Asn Trp Leu Val Val Leu Leu Leu Val Ile Phe
        115                 120                 125
Leu Leu Val Ala Asn Ile Leu Leu Val Asn Leu Leu Ile Ala Met Phe
    130                 135                 140
```

```
Ser Tyr Thr Phe Gly Lys Val Gln Gly Asn Ser Asp Leu Tyr Trp Lys
145             150             155             160
Ala Gln Arg Tyr Arg Leu Ile Arg Glu Phe His Ser Arg Pro Ala Leu
                165             170             175
Ala Pro Pro Phe Ile Val Ile Ser His Leu Arg Leu Leu Leu Arg Gln
            180             185             190
Leu Cys Arg Arg Pro Arg Ser Pro Gln Pro Ser Ser Pro Ala Leu Glu
        195             200             205
His Phe Arg Val Tyr Leu Ser Lys Glu Ala Glu Arg Lys Leu Leu Thr
    210             215             220
Trp Glu Ser Val His Lys Glu Asn Phe Leu Leu Ala Arg Ala Arg Asp
225             230             235             240
Lys Arg Glu Ser Asp Ser Glu Arg Leu Lys Arg Thr Ser Gln Lys Val
            245             250             255
Asp Leu Ala Leu Lys Gln Leu Gly His Ile Arg Glu Tyr Glu Gln Arg
            260             265             270
Leu Lys Val Leu Glu Arg Glu Val Gln Gln Cys Ser Arg Val Leu Gly
        275             280             285
Trp Val Ala Glu Ala Leu Ser Arg Ser Ala Leu Leu Pro Pro Gly Gly
    290             295             300
Pro Pro Pro Pro Asp Leu Pro Gly Ser Lys Asp
305             310             315
```

```
        <210> 113
        <211> 553
        <212> PRT
        <213> Homo sapien

        <400> 113
Met Val Gln Arg Leu Trp Val Ser Arg Leu Leu Arg His Arg Lys Ala
1               5               10              15
Gln Leu Leu Leu Val Asn Leu Leu Thr Phe Gly Leu Glu Val Cys Leu
            20              25              30
Ala Ala Gly Ile Thr Tyr Val Pro Pro Leu Leu Leu Glu Val Gly Val
        35              40              45
Glu Glu Lys Phe Met Thr Met Val Leu Gly Ile Gly Pro Val Leu Gly
    50              55              60
Leu Val Cys Val Pro Leu Leu Gly Ser Ala Ser Asp His Trp Arg Gly
65              70              75              80
Arg Tyr Gly Arg Arg Arg Pro Phe Ile Trp Ala Leu Ser Leu Gly Ile
                85              90              95
Leu Leu Ser Leu Phe Leu Ile Pro Arg Ala Gly Trp Leu Ala Gly Leu
            100             105             110
Leu Cys Pro Asp Pro Arg Pro Leu Glu Leu Ala Leu Leu Ile Leu Gly
        115             120             125
Val Gly Leu Leu Asp Phe Cys Gly Gln Val Cys Phe Thr Pro Leu Glu
    130             135             140
Ala Leu Leu Ser Asp Leu Phe Arg Asp Pro Asp His Cys Arg Gln Ala
145             150             155             160
Tyr Ser Val Tyr Ala Phe Met Ile Ser Leu Gly Gly Cys Leu Gly Tyr
                165             170             175
Leu Leu Pro Ala Ile Asp Trp Asp Thr Ser Ala Leu Ala Pro Tyr Leu
            180             185             190
Gly Thr Gln Glu Glu Cys Leu Phe Gly Leu Leu Thr Leu Ile Phe Leu
        195             200             205
Thr Cys Val Ala Ala Thr Leu Leu Val Ala Glu Glu Ala Ala Leu Gly
    210             215             220
Pro Thr Glu Pro Ala Glu Gly Leu Ser Ala Pro Ser Leu Ser Pro His
```

```
      225                    230                    235                    240
      Cys Cys Pro Cys Arg Ala Arg Leu Ala Phe Arg Asn Leu Gly Ala Leu
                      245                    250                    255
      Leu Pro Arg Leu His Gln Leu Cys Cys Arg Met Pro Arg Thr Leu Arg
                      260                    265                    270
      Arg Leu Phe Val Ala Glu Leu Cys Ser Trp Met Ala Leu Met Thr Phe
                      275                    280                    285
      Thr Leu Phe Tyr Thr Asp Phe Val Gly Glu Gly Leu Tyr Gln Gly Val
                      290                    295                    300
      Pro Arg Ala Glu Pro Gly Thr Glu Ala Arg Arg His Tyr Asp Glu Gly
      305                    310                    315                    320
      Val Arg Met Gly Ser Leu Gly Leu Phe Leu Gln Cys Ala Ile Ser Leu
                      325                    330                    335
      Val Phe Ser Leu Val Met Asp Arg Leu Val Gln Arg Phe Gly Thr Arg
                      340                    345                    350
      Ala Val Tyr Leu Ala Ser Val Ala Ala Phe Pro Val Ala Ala Gly Ala
                      355                    360                    365
      Thr Cys Leu Ser His Ser Val Ala Val Val Thr Ala Ser Ala Ala Leu
      370                    375                    380
      Thr Gly Phe Thr Phe Ser Ala Leu Gln Ile Leu Pro Tyr Thr Leu Ala
      385                    390                    395                    400
      Ser Leu Tyr His Arg Glu Lys Gln Val Phe Leu Pro Lys Tyr Arg Gly
                      405                    410                    415
      Asp Thr Gly Gly Ala Ser Ser Glu Asp Ser Leu Met Thr Ser Phe Leu
                      420                    425                    430
      Pro Gly Pro Lys Pro Gly Ala Pro Phe Pro Asn Gly His Val Gly Ala
                      435                    440                    445
      Gly Gly Ser Gly Leu Leu Pro Pro Pro Ala Leu Cys Gly Ala Ser
      450                    455                    460
      Ala Cys Asp Val Ser Val Arg Val Val Val Gly Glu Pro Thr Glu Ala
      465                    470                    475                    480
      Arg Val Val Pro Gly Arg Gly Ile Cys Leu Asp Leu Ala Ile Leu Asp
                      485                    490                    495
      Ser Ala Phe Leu Leu Ser Gln Val Ala Pro Ser Leu Phe Met Gly Ser
                      500                    505                    510
      Ile Val Gln Leu Ser Gln Ser Val Thr Ala Tyr Met Val Ser Ala Ala
                      515                    520                    525
      Gly Leu Gly Leu Val Ala Ile Tyr Phe Ala Thr Gln Val Val Phe Asp
                      530                    535                    540
      Lys Ser Asp Leu Ala Lys Tyr Ser Ala
      545                    550
```

```
          <210> 114
          <211> 241
          <212> PRT
          <213> Homo sapien


          <400> 114
      Met Gln Cys Phe Ser Phe Ile Lys Thr Met Met Ile Leu Phe Asn Leu
      1             5                    10                    15
      Leu Ile Phe Leu Cys Gly Ala Ala Leu Leu Ala Val Gly Ile Trp Val
                      20                    25                    30
      Ser Ile Asp Gly Ala Ser Phe Leu Lys Ile Phe Gly Pro Leu Ser Ser
                      35                    40                    45
      Ser Ala Met Gln Phe Val Asn Val Gly Tyr Phe Leu Ile Ala Ala Gly
          50                    55                    60
      Val Val Val Phe Ala Leu Gly Phe Leu Gly Cys Tyr Gly Ala Lys Thr
      65                    70                    75                    80
```

```
Glu Ser Lys Cys Ala Leu Val Thr Phe Phe Phe Ile Leu Leu Leu Ile
            85                  90              95
Phe Ile Ala Glu Val Ala Ala Ala Val Val Ala Leu Val Tyr Thr Thr
            100             105             110
Met Ala Glu His Phe Leu Thr Leu Leu Val Val Pro Ala Ile Lys Lys
            115             120             125
Asp Tyr Gly Ser Gln Glu Asp Phe Thr Gln Val Trp Asn Thr Thr Met
    130             135             140
Lys Gly Leu Lys Cys Cys Gly Phe Thr Asn Tyr Thr Asp Phe Glu Asp
145             150             155             160
Ser Pro Tyr Phe Lys Glu Asn Ser Ala Phe Pro Pro Phe Cys Cys Asn
            165             170             175
Asp Asn Val Thr Asn Thr Ala Asn Glu Thr Cys Thr Lys Gln Lys Ala
            180             185             190
His Asp Gln Lys Val Glu Gly Cys Phe Asn Gln Leu Leu Tyr Asp Ile
            195             200             205
Arg Thr Asn Ala Val Thr Val Gly Gly Val Ala Ala Gly Ile Gly Gly
    210             215             220
Leu Glu Leu Ala Ala Met Ile Val Ser Met Tyr Leu Tyr Cys Asn Leu
225             230             235             240
Gln
```

<210> 115
<211> 366
<212> DNA
<213> Homo sapien

<400> 115
```
gctctttctc tcccctcctc tgaatttaat tctttcaact tgcaatttgc aaggattaca    60
catttcactg tgatgtatat tgtgttgcaa aaaaaaaaa gtgtctttgt ttaaaattac   120
ttggtttgtg aatccatctt gctttttccc cattggaact agtcattaac ccatctctga   180
actggtagaa aaacatctga agagctagtc tatcagcatc tgacaggtga attggatggt   240
tctcagaacc atttcacccca gacagcctgt ttctatcctg tttaataaat tagtttgggt   300
tctctacatg cataacaaac cctgctccaa tctgtcacat aaaagtctgt gacttgaagt   360
ttagtc                                                             366
```

<210> 116
<211> 282
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(282)
<223> n = A,T,C or G

<400> 116
```
acaaagatga accatttcct atattatagc aaaattaaaa tctacccgta ttctaatatt    60
gagaaatgag atnaaacaca atnttataaa gtctacttag agaagatcaa gtgacctcaa   120
agactttact attttcatat tttaagacac atgatttatc ctattttagt aacctggttc   180
atacgttaaa caaaggataa tgtgaacagc agagaggatt tgttggcaga aaatctatgt   240
tcaatctnga actatctana tcacagacat ttctattcct tt                     282
```

<210> 117
<211> 305
<212> DNA
<213> Homo sapien

45

```
        <220>
        <221> misc_feature
        <222> (1)...(305)
        <223> n = A,T,C or G

        <400> 117
acacatgtcg cttcactgcc ttcttagatg cttctggtca acatanagga acagggacca      60
tatttatcct ccctcctgaa acaattgcaa aataanacaa aatatatgaa acaattgcaa     120
aataaggcaa aatatatgaa acaacaggtc tcgagatatt ggaaatcagt caatgaagga     180
tactgatccc tgatcactgt cctaatgcag gatgtgggaa acagatgagg tcacctctgt     240
gactgcccca gcttactgcc tgtagagagt ttctangctg cagttcagac agggagaaat     300
tgggt                                                                 305

        <210> 118
        <211> 71
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(71)
        <223> n = A,T,C or G

        <400> 118
accaaggtgt ntgaatctct gacgtgggga tctctgattc ccgcacaatc tgagtggaaa      60
aantcctggg t                                                          71

        <210> 119
        <211> 212
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(212)
        <223> n = A,T,C or G

        <400> 119
actccggttg gtgtcagcag cacgtggcat tgaacatngc aatgtggagc ccaaaccaca      60
gaaaatgggg tgaaattggc caactttcta tnaacttatg ttggcaantt tgccaccaac     120
agtaagctgg cccttctaat aaaagaaaat tgaaaggttt ctcactaanc ggaattaant     180
aatggantca aganactccc aggcctcagc gt                                   212

        <210> 120
        <211> 90
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(90)
        <223> n = A,T,C or G

        <400> 120
actcgttgca natcaggggc cccccagagt caccgttgca ggagtccttc tggtcttgcc      60
ctccgccggc gcagaacatg ctggggtggt                                      90
```

46

```
<210> 121
<211> 218
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(218)
<223> n = A,T,C or G

<400> 121
tgtancgtga anacgacaga nagggttgtc aaaaatggag aanccttgaa gtcattttga      60
gaataagatt tgctaaaaga tttggggcta aaacatggtt attgggagac atttctgaag     120
atatncangt aaaattangga atgaattcat ggttcttttg ggaattcctt tacgatngcc    180
agcatanact tcatgtgggg atancagcta cccttgta                             218

<210> 122
<211> 171
<212> DNA
<213> Homo sapien

<400> 122
tagggggtgta tgcaactgta aggacaaaaa ttgagactca actggcttaa ccaataaagg     60
catttgttag ctcatggaac aggaagtcgg atggtggggc atcttcagtg ctgcatgagt     120
caccacccccg gcggggtcat ctgtgccaca ggtccctgtt gacagtgcgg t             171

<210> 123
<211> 76
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(76)
<223> n = A,T,C or G

<400> 123
tgtagcgtga agacnacaga atggtgtgtg ctgtgctatc caggaacaca tttattatca     60
ttatcaanta ttgtgt                                                     76

<210> 124
<211> 131
<212> DNA
<213> Homo sapien

<400> 124
acctttcccc aaggccaatg tcctgtgtgc taactggccg gctgcaggac agctgcaatt     60
caatgtgctg ggtcatatgg aggggaggag actctaaaat agccaatttt attctcttgg    120
ttaagatttg t                                                         131

<210> 125
<211> 432
<212> DNA
<213> Homo sapien

<400> 125
actttatcta ctggctatga aatagatggt ggaaaattgc gttaccaact ataccactgg     60
cttgaaaaag aggtgatagc tcttcagagg acttgtgact tttgctcaga tgctgaagaa    120
```

```
ctacagtctg catttggcag aaatgaagat gaatttggat taaatgagga tgctgaagat     180
ttgcctcacc aaacaaaagt gaaacaactg agagaaaatt ttcaggaaaa aagacagtgg     240
ctcttgaagt atcagtcact tttgagaatg tttcttagtt actgcatact tcatggatcc     300
catggtgggg gtcttgcatc tgtaagaatg gaattgattt tgcttttgca agaatctcag     360
caggaaacat cagaaccact attttctagc cctctgtcag agcaaacctc agtgcctctc     420
ctctttgctt gt                                                         432
```

```
        <210> 126
        <211> 112
        <212> DNA
        <213> Homo sapien

        <400> 126
acacaacttg aatagtaaaa tagaaactga gctgaaattt ctaattcact ttctaaccat      60
agtaagaatg atatttcccc ccagggatca ccaaatattt ataaaaattt gt             112
```

```
        <210> 127
        <211> 54
        <212> DNA
        <213> Homo sapien

        <400> 127
accacgaaac cacaaacaag atggaagcat caatccactt gccaagcaca gcag            54
```

```
        <210> 128
        <211> 323
        <212> DNA
        <213> Homo sapien

        <400> 128
acctcattag taattgtttt gttgtttcat tttttttctaa tgtctcccct ctaccagctc     60
acctgagata acagaatgaa aatggaagga cagccagatt tctcctttgc tctctgctca     120
ttctctctga agtctaggtt acccattttg gggacccatt ataggcaata aacacagttc     180
ccaaagcatt tggacagttt cttgttgtgt tttagaatgg ttttcctttt cttagccttt     240
ttcctgcaaa aggctcactc agtcccttgc ttgctcagtg gactgggctc cccagggcct     300
aggctgcctt cttttccatg tcc                                             323
```

```
        <210> 129
        <211> 192
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(192)
        <223> n = A,T,C or G

        <400> 129
acatacatgt gtgtatattt ttaaatatca cttttgtatc actctgactt tttagcatac      60
tgaaaacaca ctaacataat ttntgtgaac catgatcaga tacaacccaa atcattcatc     120
tagcacattc atctgtgata naaagatagg tgagtttcat ttccttcacg ttggccaatg     180
gataaacaaa gt                                                         192
```

```
        <210> 130
        <211> 362
        <212> DNA
        <213> Homo sapien
```

```
        <220>
        <221> misc_feature
        <222> (1)...(362)
        <223> n = A,T,C or G

        <400> 130
ccctttttta tggaatgagt agactgtatg tttgaanatt tanccacaac ctctttgaca      60
tataatgacg caacaaaaag gtgctgttta gtcctatggt tcagtttatg cccctgacaa     120
gtttccattg tgttttgccg atcttctggc taatcgtggt atcctccatg ttattagtaa     180
ttctgtattc cattttgtta acgcctggta gatgtaacct gctangaggc taactttata     240
cttatttaaa agctcttatt ttgtggtcat taaaatggca atttatgtgc agcactttat     300
tgcagcagga agcacgtgtg ggttggttgt aaagctcttt gctaatctta aaaagtaatg     360
gg                                                                     362


        <210> 131
        <211> 332
        <212> DNA
        <213> Homo sapien


        <220>
        <221> misc_feature
        <222> (1)...(332)
        <223> n = A,T,C or G


        <400> 131
ctttttgaaa gatcgtgtcc actcctgtgg acatcttgtt ttaatggagt ttcccatgca      60
gtangactgg tatggttgca gctgtccaga taaaaacatt tgaagagctc caaaatgaga     120
gttctcccag gttcgccctg ctgctccaag tctcagcagc agcctctttt aggaggcatc     180
ttctgaacta gattaaggca gcttgtaaat ctgatgtgat ttggtttatt atccaactaa     240
cttccatctg ttatcactgg agaaagccca gactccccan gacnggtacg gattgtgggc     300
atanaaggat tgggtgaagc tggcgttgtg gt                                    332


        <210> 132
        <211> 322
        <212> DNA
        <213> Homo sapien


        <220>
        <221> misc_feature
        <222> (1)...(322)
        <223> n = A,T,C or G


        <400> 132
acttttgcca ttttgtatat ataaacaatc ttgggacatt ctcctgaaaa ctaggtgtcc      60
agtggctaag agaactcgat ttcaagcaat tctgaaagga aaaccagcat gacacagaat     120
ctcaaattcc caaacagggg ctctgtggga aaaatgaggg aggacctttg tatctcgggt     180
tttagcaagt taaaatgaan atgacaggaa aggcttattt atcaacaaag agaagagttg     240
ggatgcttct aaaaaaaact ttggtagaga aaataggaat gctnaatcct agggaagcct     300
gtaacaatct acaattggtc ca                                               322


        <210> 133
        <211> 278
        <212> DNA
        <213> Homo sapien


        <220>
        <221> misc_feature
        <222> (1)...(278)
```

49

```
        <223> n = A,T,C or G

        <400> 133
acaagccttc acaagtttaa ctaaattggg attaatcttt ctgtanttat ctgcataatt        60
cttgtttttc tttccatctg gctcctgggt tgacaatttg tggaaacaac tctattgcta       120
ctatttaaaa aaaatcacaa atctttccct ttaagctatg ttnaattcaa actattcctg       180
ctattcctgt tttgtcaaag aaattatatt tttcaaaata tgtntatttg tttgatgggt       240
cccacgaaac actaataaaa accacagaga ccagcctg                               278


        <210> 134
        <211> 121
        <212> DNA
        <213> Homo sapien


        <220>
        <221> misc_feature
        <222> (1)...(121)
        <223> n = A,T,C or G


        <400> 134
gtttanaaaa cttgtttagc tccatagagg aaagaatgtt aaactttgta ttttaaaaca        60
tgattctctg aggttaaact tggttttcaa atgttatttt tacttgtatt ttgcttttgg       120
t                                                                       121


        <210> 135
        <211> 350
        <212> DNA
        <213> Homo sapien


        <220>
        <221> misc_feature
        <222> (1)...(350)
        <223> n = A,T,C or G


        <400> 135
acttanaacc atgcctagca catcagaatc cctcaaagaa catcagtata atcctatacc        60
atancaagtg gtgactggtt aagcgtgcga caaaggtcag ctggcacatt acttgtgtgc       120
aaacttgata cttttgttct aagtaggaac tagtatacag tncctaggan tggtactcca       180
gggtgccccc caactcctgc agccgctcct ctgtgccagn ccctgnaagg aactttcgct       240
ccacctcaat caagccctgg gccatgctac ctgcaattgg ctgaacaaac gtttgctgag       300
ttcccaagga tgcaaagcct ggtgctcaac tcctggggcg tcaactcagt                  350


        <210> 136
        <211> 399
        <212> DNA
        <213> Homo sapien


        <220>
        <221> misc_feature
        <222> (1)...(399)
        <223> n = A,T,C or G


        <400> 136
tgtaccgtga agacgacaga agttgcatgg cagggacagg gcagggccga ggccagggtt        60
gctgtgattg tatccgaata ntcctcgtga gaaaagataa tgagatgacg tgagcagcct       120
gcagacttgt gtctgccttc aanaagccag acaggaaggc cctgcctgcc ttggctctga       180
cctggcggcc agccagccag ccacaggtgg gcttcttcct tttgtggtga caacnccaag       240
aaaactgcag aggcccaggg tcaggtgtna gtgggtangt gaccataaaa caccaggtgc       300
```

```
tcccaggaac ccgggcaaag gccatcccca cctacagcca gcatgcccac tggcgtgatg    360
ggtgcagang gatgaagcag ccagntgttc tgctgtggt                          399
```

          <210> 137
          <211> 165
          <212> DNA
          <213> Homo sapien

          <220>
          <221> misc_feature
          <222> (1)...(165)
          <223> n = A,T,C or G

          <400> 137
```
actggtgtgg tnggggtga tgctggtggt anaagttgan gtgacttcan gatggtgtgt    60
ggaggaagtg tgtgaacgta gggatgtaga ngttttggcc gtgctaaatg agcttcggga   120
ttggctggtc ccactggtgg tcactgtcat tggtgggggtt cctgt                  165
```

          <210> 138
          <211> 338
          <212> DNA
          <213> Homo sapien

          <220>
          <221> misc_feature
          <222> (1)...(338)
          <223> n = A,T,C or G

          <400> 138
```
actcactgga atgccacatt cacaacagaa tcagaggtct gtgaaaacat taatggctcc    60
ttaacttctc cagtaagaat cagggacttg aaatggaaac gttaacagcc acatgcccaa   120
tgctgggcag tctcccatgc cttccacagt gaaagggctt gagaaaaatc acatccaatg   180
tcatgtgttt ccagccacac caaaaggtgc ttggggtgga gggctggggg catananggt   240
cangcctcag gaagcctcaa gttccattca gctttgccac tgtacattcc ccatntttaa   300
aaaaactgat gccttttttt tttttttttg taaaattc                          338
```

          <210> 139
          <211> 382
          <212> DNA
          <213> Homo sapien

          <400> 139
```
gggaatcttg gttttggca tctggtttgc ctatagccga ggccactttg acagaacaaa    60
gaaagggact tcgagtaaga aggtgattta cagccagcct agtgcccgaa gtgaaggaga   120
attcaaacag acctcgtcat tcctggtgtg agcctggtcg gctcaccgcc tatcatctgc   180
atttgcctta ctcaggtgct accggactct ggcccctgat gtctgtagtt tcacaggatg   240
ccttatttgt cttctacacc ccacagggcc ccctacttct tcggatgtgt ttttaataat   300
gtcagctatg tgccccatcc tccttcatgc cctccctccc tttcctacca ctgctgagtg   360
gcctggaact tgtttaaagt gt                                            382
```

          <210> 140
          <211> 200
          <212> DNA
          <213> Homo sapien

          <220>
          <221> misc_feature
          <222> (1)...(200)

```
        <223> n = A,T,C or G

        <400> 140
accaaanctt ctttctgttg tgttngattt tactataggg gtttngcttn ttctaaanat       60
actttcatt taacancttt tgttaagtgt caggctgcac tttgctccat anaattattg       120
ttttcacatt tcaacttgta tgtgtttgtc tcttanagca ttggtgaaat cacatatttt      180
atattcagca taaaggagaa                                                   200

        <210> 141
        <211> 335
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(335)
        <223> n = A,T,C or G

        <400> 141
actttatttt caaaacactc atatgttgca aaaaacacat agaaaaataa agtttggtgg       60
gggtgctgac taaacttcaa gtcacagact tttatgtgac agattggagc agggtttgtt      120
atgcatgtag agaacccaaa ctaatttatt aaacaggata gaaacaggct gtctgggtga      180
aatggttctg agaaccatcc aattcacctg tcagatgctg atanactagc tcttcagatg      240
tttttctacc agttcagaga tnggttaatg actanttcca atggggaaaa agcaagatgg      300
attcacaaac caagtaattt taaacaaaga cactt                                 335

        <210> 142
        <211> 459
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(459)
        <223> n = A,T,C or G

        <400> 142
accaggttaa tattgccaca tatatccttt ccaattgcgg gctaaacaga cgtgtattta       60
gggttgttta aagacaaccc agcttaatat caagagaaat tgtgaccttt catggagtat      120
ctgatggaga aaacactgag ttttgacaaa tcttatttta ttcagatagc agtctgatca      180
cacatggtcc aacaacactc aaataataaa tcaaatatna tcagatgtta aagattggtc      240
ttcaaacatc atagccaatg atgccccgct tgcctataat ctctccgaca taaaaccaca      300
tcaacacctc agtggccacc aaaccattca gcacagcttc cttaactgtg agctgtttga      360
agctaccagt ctgagcacta ttgactatnt ttttcangct ctgaatagct ctagggatct      420
cagcangggt gggaggaacc agctcaacct tggcgtant                             459

        <210> 143
        <211> 140
        <212> DNA
        <213> Homo sapien

        <400> 143
acatttcctt ccaccaagtc aggactcctg gcttctgtgg gagttcttat cacctgaggg       60
aaatccaaac agtctctcct agaaaggaat agtgtcacca accccacccca tctccctgag      120
accatccgac ttccctgtgt                                                   140

        <210> 144
        <211> 164
```

<210> (continued)
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(164)
<223> n = A,T,C or G

<400> 144
acttcagtaa caacatacaa taacaacatt aagtgtatat tgccatcttt gtcattttct   60
atctatacca ctctcccttc tgaaaacaan aatcactanc caatcactta tacaaatttg   120
aggcaattaa tccatatttg ttttcaataa ggaaaaaaag atgt   164

        <210> 145
        <211> 303
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(303)
        <223> n = A,T,C or G

        <400> 145
acgtagacca tccaactttg tatttgtaat ggcaaacatc cagnagcaat tcctaaacaa   60
actggagggt atttataccc aattatccca ttcattaaca tgccctcctc ctcaggctat   120
gcaggacagc tatcataagt cggcccaggc atccagatac taccatttgt ataaacttca   180
gtaggggagt ccatccaagt gacaggtcta atcaaaggag gaaatggaac ataagcccag   240
tagtaaaatn ttgcttagct gaaacagcca caaaagactt accgccgtgg tgattaccat   300
caa   303

        <210> 146
        <211> 327
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(327)
        <223> n = A,T,C or G

        <400> 146
actgcagctc aattagaagt ggtctctgac tttcatcanc ttctccctgg gctccatgac   60
actggcctgg agtgactcat tgctctggtt ggttgagaga gctcctttgc caacaggcct   120
ccaagtcagg gctgggattt gtttcctttc cacattctag caacaatatg ctggccactt   180
cctgaacagg gagggtggga ggagccagca tggaacaagc tgccactttc taaagtagcc   240
agacttgccc ctgggcctgt cacacctact gatgaccttc tgtgcctgca ggatggaatg   300
taggggtgag ctgtgtgact ctatggt   327

        <210> 147
        <211> 173
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(173)
        <223> n = A,T,C or G

```
       <400> 147
acattgtttt tttgagataa agcattgana gagctctcct taacgtgaca caatggaagg    60
actggaacac atacccacat ctttgttctg agggataatt ttctgataaa gtcttgctgt   120
atattcaagc acatatgtta tatattattc agttccatgt ttatagccta gtt          173

       <210> 148
       <211> 477
       <212> DNA
       <213> Homo sapien

       <220>
       <221> misc_feature
       <222> (1)...(477)
       <223> n = A,T,C or G

       <400> 148
acaaccactt tatctcatcg aatttttaac ccaaactcac tcactgtgcc tttctatcct    60
atgggatata ttatttgatg ctccatttca tcacacatat atgaataata cactcatact   120
gccctactac ctgctgcaat aatcacattc ccttcctgtc ctgaccctga agccattggg   180
gtggtcctag tggccatcag tccangcctg caccttgagc ccttgagctc cattgctcac   240
nccancccac ctcaccgacc ccatcctctt acacagctac ctccttgctc tctaacccca   300
tagattatnt ccaaattcag tcaattaagt tactattaac actctacccg acatgtccag   360
caccactggt aagccttctc cagccaacac acacacacac acacncacac acacacatat   420
ccaggcacag gctacctcat cttcacaatc accccttttaa ttaccatgct atggtgg       477

       <210> 149
       <211> 207
       <212> DNA
       <213> Homo sapien

     . <400> 149
acagttgtat tataatatca agaaataaac ttgcaatgag agcatttaag agggaagaac    60
taacgtattt tagagagcca aggaaggttt ctgtggggag tgggatgtaa ggtggggcct   120
gatgataaat aagagtcagc caggtaagtg ggtggtgtgg tatgggcaca gtgaagaaca   180
tttcaggcag agggaacagc agtgaaa                                        207

       <210> 150
       <211> 111
       <212> DNA
       <213> Homo sapien

       <220>
       <221> misc_feature
       <222> (1)...(111)
       <223> n = A,T,C or G

       <400> 150
accttgattt cattgctgct ctgatggaaa cccaactatc taatttagct aaaacatggg    60
cacttaaatg tggtcagtgt ttggacttgt taactantgg catctttggg t             111

       <210> 151
       <211> 196
       <212> DNA
       <213> Homo sapien

       <400> 151
agcgcggcag gtcatattga acattccaga tacctatcat tactcgatgc tgttgataac    60
```

```
agcaagatgg ctttgaactc agggtcacca ccagctattg gaccttacta tgaaaaccat      120
ggataccaac cggaaaaccc ctatcccgca cagcccactg tggtccccac tgtctacgag      180
gtgcatccgg ctcagt                                                      196
```

```
        <210> 152
        <211> 132
        <212> DNA
        <213> Homo sapien

        <400> 152
acagcacttt cacatgtaag aagggagaaa ttcctaaatg taggagaaag ataacagaac       60
cttccccttt tcatctagtg gtggaaacct gatgctttat gttgacagga atagaaccag      120
gagggagttt gt                                                          132
```

```
        <210> 153
        <211> 285
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(285)
        <223> n = A,T,C or G

        <400> 153
acaanaccca nganaggcca ctggccgtgg tgtcatggcc tccaaacatg aaagtgtcag       60
cttctgctct tatgtcctca tctgacaact ctttaccatt tttatcctcg ctcagcagga      120
gcacatcaat aaagtccaaa gtcttggact tggccttggc ttggaggaag tcatcaacac      180
cctggctagt gagggtgcgg cgccgctcct ggatgacggc atctgtgaag tcgtgcacca      240
gtctgcaggc cctgtggaag cgccgtccac acggagtnag gaatt                      285
```

```
        <210> 154
        <211> 333
        <212> DNA
        <213> Homo sapien

        <400> 154
accacagtcc tgttgggcca gggcttcatg accctttctg tgaaaagcca tattatcacc       60
accccaaatt tttccttaaa tatctttaac tgaaggggtc agcctcttga ctgcaaagac      120
cctaagccgg ttacacagct aactcccact ggccctgatt tgtgaaattg ctgctgcctg      180
attggcacag gagtcgaagg tgttcagctc ccctcctccg tggaacgaga ctctgatttg      240
agtttcacaa attctcgggc cacctcgtca ttgctcctct gaaataaaat ccggagaatg      300
gtcaggcctg tctcatccat atggatcttc cgg                                   333
```

```
        <210> 155
        <211> 308
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(308)
        <223> n = A,T,C or G

        <400> 155
actggaaata ataaaaccca catcacagtg ttgtgtcaaa gatcatcagg gcatggatgg       60
gaaagtgctt tgggaactgt aaagtgccta acacatgatc gatgattttt gttataatat      120
ttgaatcacg gtgcatacaa actctcctgc ctgctcctcc tgggccccag ccccagcccc      180
```

55

```
atcacagctc actgctctgt tcatccaggc ccagcatgta gtggctgatt cttcttggct    240
gcttttagcc tccanaagtt tctctgaagc caaccaaacc tctangtgta aggcatgctg    300
gccctggt                                                             308
```

        <210> 156
        <211> 295
        <212> DNA
        <213> Homo sapien

        <400> 156
```
accttgctcg gtgcttggaa catattagga actcaaaata tgagatgata acagtgccta     60
ttattgatta ctgagagaac tgttagacat ttagttgaag attttctaca caggaactga    120
gaataggaga ttatgtttgg ccctcatatt ctctcctatc ctccttgcct cattctatgt    180
ctaatatatt ctcaatcaaa taaggttagc ataatcagga aatcgaccaa ataccaatat    240
aaaaccagat gtctatcctt aagattttca aatagaaaac aaattaacag actat         295
```

        <210> 157
        <211> 126
        <212> DNA
        <213> Homo sapien

        <400> 157
```
acaagtttaa atagtgctgt cactgtgcat gtgctgaaat gtgaaatcca ccacatttct     60
gaagagcaaa acaaattctg tcatgtaatc tctatcttgg gtcgtgggta tatctgtccc    120
cttagt                                                               126
```

        <210> 158
        <211> 442
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(442)
        <223> n = A,T,C or G

        <400> 158
```
acccactggt cttggaaaca cccatcctta atacgatgat ttttctgtcg tgtgaaaatg     60
aanccagcag gctgccccta gtcagtcctt ccttccagag aaaaagagat ttgagaaagt    120
gcctgggtaa ttcaccatta atttcctccc ccaaactctc tgagtcttcc cttaatattt    180
ctggtggttc tgaccaaagc aggtcatggt ttgttgagca tttgggatcc cagtgaagta    240
natgtttgta gccttgcata cttagccctt cccacgcaca aacggagtgg cagagtggtg    300
ccaaccctgt tttcccagtc cacgtagaca gattcacagt gcggaattct ggaagctgga    360
nacagacggg ctctttgcag agccgggact ctgagangga catgagggcc tctgcctctg    420
tgttcattct ctgatgtcct gt                                             442
```

        <210> 159
        <211> 498
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(498)
        <223> n = A,T,C or G

        <400> 159
```
acttccaggt aacgttgttg tttccgttga gcctgaactg atgggtgacg ttgtaggttc     60
```

```
tccaacaaga actgaggttg cagagcgggt agggaagagt gctgttccag ttgcacctgg    120
gctgctgtgg actgttgttg attcctcact acggcccaag gttgtggaac tggcanaaag    180
gtgtgttgtt gganttgagc tcgggcggct gtggtaggtt gtgggctctt caacaggggc    240
tgctgtggtg ccgggangtg aangtgttgt gtcacttgag cttggccagc tctggaaagt    300
antanattct tcctgaaggc cagcgcttgt ggagctggca ngggtcantg ttgtgtgtaa    360
cgaaccagtg ctgctgtggg tgggtgtana tcctccacaa agcctgaagt tatggtgtcn    420
tcaggtaana atgtggtttc agtgtccctg ggcngctgtg gaaggttgta nattgtcacc    480
aagggaataa gctgtggt                                                  498
```

        <210> 160
        <211> 380
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(380)
        <223> n = A,T,C or G

        <400> 160
```
acctgcatcc agcttccctg ccaaactcac aaggagacat caacctctag acagggaaac     60
agcttcagga tacttccagg agacagagcc accagcagca aaacaaatat tcccatgcct    120
ggagcatggc atagaggaag ctganaaatg tggggtctga ggaagccatt tgagtctggc    180
cactagacat ctcatcagcc acttgtgtga agagatgccc catgacccca gatgcctctc    240
ccacccttac ctccatctca cacacttgag ctttccactc tgtataattc taacatcctg    300
gagaaaaatg gcagtttgac cgaacctgtt cacaacggta gaggctgatt tctaacgaaa    360
cttgtagaat gaagcctgga                                                380
```

        <210> 161
        <211> 114
        <212> DNA
        <213> Homo sapien

        <400> 161
```
actccacatc ccctctgagc aggcggttgt cgttcaaggt gtatttggcc ttgcctgtca     60
cactgtccac tggcccctta tccacttggt gcttaatccc tcgaaagagc atgt          114
```

        <210> 162
        <211> 177
        <212> DNA
        <213> Homo sapien

        <400> 162
```
actttctgaa tcgaatcaaa tgatacttag tgtagttta atatcctcat atatatcaaa      60
gttttactac tctgataatt ttgtaaacca ggtaaccaga acatccagtc atacagcttt    120
tggtgatata taacttggca ataacccagt ctggtgatac ataaaactac tcactgt       177
```

        <210> 163
        <211> 137
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(137)
        <223> n = A,T,C or G

        <400> 163

57

```
catttataca gacaggcgtg aagacattca cgacaaaaac gcgaaattct atcccgtgac        60
canagaaggc agctacggct actcctacat cctggcgtgg gtggccttcg cctgcacctt       120
catcagcggc atgatgt                                                      137
```

```
        <210> 164
        <211> 469
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(469)
        <223> n = A,T,C or G

        <400> 164
cttatcacaa tgaatgttct cctgggcagc gttgtgatct ttgccacctt cgtgacttta        60
tgcaatgcat catgctattt catacctaat gagggagttc caggagattc aaccaggaaa       120
tgcatggatc tcaaaggaaa caaacaccca ataaactcgg agtggcagac tgacaactgt       180
gagacatgca cttgctacga aacagaaatt tcatgttgca cccttgtttc tacacctgtg       240
ggttatgaca aagacaactg ccaaagaatc ttcaagaagg aggactgcaa gtatatcgtg       300
gtggagaaga aggacccaaa aaagacctgt tctgtcagtg aatggataat ctaatgtgct       360
tctagtaggc acagggctcc caggccaggc ctcattctcc tctggcctct aatagtcaat       420
gattgtgtag ccatgcctat cagtaaaaag atntttgagc aaacacttt                   469
```

```
        <210> 165
        <211> 195
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(195)
        <223> n = A,T,C or G

        <400> 165
acagtttttt atanatatcg acattgccgg cacttgtgtt cagtttcata aagctggtgg        60
atccgctgtc atccactatt ccttggctag agtaaaaatt attcttatag cccatgtccc       120
tgcaggccgc ccgcccgtag ttctcgttcc agtcgtcttg gcacacaggg tgccaggact       180
tcctctgaga tgagt                                                        195
```

```
        <210> 166
        <211> 383
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(383)
        <223> n = A,T,C or G

        <400> 166
acatcttagt agtgtggcac atcagggggc catcagggtc acagtcactc atagcctcgc        60
cgaggtcgga gtccacacca ccggtgtagg tgtgctcaat cttgggcttg gcgcccacct       120
ttggagaagg gatatgctgc acacacatgt ccacaaagcc tgtgaactcg ccaaagaatt       180
tttgcagacc agcctgagca aggggcggat gttcagcttc agctcctcct tcgtcaggtg       240
gatgccaacc tcgtctangg tccgtgggaa gctggtgtcc acntcaccta caacctgggc       300
gangatctta taaagaggct ccnagataaa ctccacgaaa cttctctggg agctgctagt       360
nggggccttt ttggtgaact ttc                                               383
```

```
        <210> 167
        <211> 247
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(247)
        <223> n = A,T,C or G

        <400> 167
acagagccag accttggcca taaatgaanc agagattaag actaaacccc aagtcganat         60
tggagcagaa actggagcaa gaagtgggcc tggggctgaa gtagagacca aggccactgc        120
tatanccata cacagagcca actctcaggc caaggcnatg gttggggcag anccagagac        180
tcaatctgan tccaaagtgg tggctggaac actggtcatg acanaggcag tgactctgac        240
tgangtc                                                                   247

        <210> 168
        <211> 273
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(273)
        <223> n = A,T,C or G

        <400> 168
acttctaagt tttctagaag tggaaggatt gtantcatcc tgaaaatggg tttacttcaa         60
aatccctcan ccttgttctt cacnactgtc tatactgana gtgtcatgtt tccacaaagg        120
gctgacacct gagcctgnat tttcactcat ccctgagaag cccttttccag tagggtgggc       180
aattcccaac ttccttgcca caagcttccc aggctttctc ccctggaaaa ctccagcttg        240
agtcccagat acactcatgg gctgccctgg gca                                      273

        <210> 169
        <211> 431
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(431)
        <223> n = A,T,C or G

        <400> 169
acagccttgg cttccccaaa ctccacagtc tcagtgcaga aagatcatct tccagcagtc         60
agctcagacc agggtcaaag gatgtgacat caacagtttc tggtttcaga acaggttcta        120
ctactgtcaa atgacccccc atacttcctc aaaggctgtg gtaagttttg cacaggtgag        180
ggcagcagaa aggggggtant tactgatgga caccatcttc tctgtatact ccacactgac        240
cttgccatgg gcaaaggccc ctaccacaaa aacaatagga tcactgctgg gcaccagctc        300
acgcacatca ctgacaaccg ggatggaaaa agaantgcca actttcatac atccaactgg        360
aaagtgatct gatactggat tcttaattac cttcaaaagc ttctgggggc catcagctgc        420
tcgaacactg a                                                             431

        <210> 170
        <211> 266
        <212> DNA
```

```
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(266)
<223> n = A,T,C or G

<400> 170
acctgtgggc tgggctgtta tgcctgtgcc ggctgctgaa agggagttca gaggtggagc     60
tcaaggagct ctgcaggcat tttgccaanc ctctccanag canagggagc aacctacact    120
ccccgctaga aagacaccag attggagtcc tgggagggggg agttgggggtg ggcatttgat   180
gtatacttgt cacctgaatg aangagccag agaggaanga gacgaanatg anattggcct    240
tcaaagctag gggtctggca ggtgga                                         266

<210> 171
<211> 1248
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(1248)
<223> n = A,T,C or G

<400> 171
ggcagccaaa tcataaacgg cgaggactgc agcccgcact cgcagccctg gcaggcggca     60
ctggtcatgg aaaacgaatt gttctgctcg ggcgtcctgg tgcatccgca gtgggtgctg    120
tcagccgcac actgtttcca gaagtgagtg cagagctcct acaccatcgg gctgggcctg    180
cacagtcttg aggccgacca agagccaggg agccagatgg tggaggccag cctctccgta    240
cggcacccag agtacaacag acccttgctc gctaacgacc tcatgctcat caagttggac    300
gaatccgtgt ccgagtctga caccatccgg agcatcagca ttgcttcgca gtgccctacc    360
gcggggaact cttgcctcgt ttctggctgg ggtctgctgg cgaacggcag aatgcctacc    420
gtgctgcagt gcgtgaacgt gtcggtggtg tctgaggagg tctgcagtaa gctctatgac    480
ccgctgtacc accccagcat gttctgcgcc ggcggagggc aagaccagaa ggactcctgc    540
aacggtgact ctggggggcc cctgatctgc aacgggtact tgcagggcct tgtgtctttc    600
ggaaaagccc cgtgtggcca agttggcgtg ccaggtgtct acaccaacct ctgcaaattc    660
actgagtgga tagagaaaac cgtccaggcc agttaactct ggggactggg aacccatgaa    720
attgaccccc aaatacatcc tgcggaagga attcaggaat atctgttccc agcccctcct    780
ccctcaggcc caggagtcca ggcccccagc ccctcctccc tcaaaccaag ggtacagatc    840
cccagcccct cctccctcag acccaggagt ccagaccccc cagcccctcc tccctcagac    900
ccaggagtcc agcccctcct ccctcagacc caggagtcca gacccccag ccctcctcc    960
ctcagaccca ggggtccagg cccccaaccc ctcctccctc agactcagag gtccaagccc   1020
ccaacccntc attccccaga cccagaggtc caggtcccag cccctcntcc ctcagaccca   1080
gcggtccaat gccacctaga ctntccctgt acacagtgcc cccttgtggc acgttgaccc   1140
aaccttacca gttggttttt cattttttngt ccctttcccc tagatccaga aataaagttt   1200
aagagaagng caaaaaaaaa aaaaaaaaaa aaaaaaaaa aaaaaaa                    1248

<210> 172
<211> 159
<212> PRT
<213> Homo sapien

<220>
<221> VARIANT
<222> (1)...(159)
<223> Xaa = Any Amino Acid

<400> 172
```

```
Met Val Glu Ala Ser Leu Ser Val Arg His Pro Glu Tyr Asn Arg Pro
1               5                   10                  15
Leu Leu Ala Asn Asp Leu Met Leu Ile Lys Leu Asp Glu Ser Val Ser
            20                  25                  30
Glu Ser Asp Thr Ile Arg Ser Ile Ser Ile Ala Ser Gln Cys Pro Thr
            35                  40                  45
Ala Gly Asn Ser Cys Leu Val Ser Gly Trp Gly Leu Leu Ala Asn Gly
        50                  55                  60
Arg Met Pro Thr Val Leu Gln Cys Val Asn Val Ser Val Val Ser Glu
65                  70                  75                  80
Glu Val Cys Ser Lys Leu Tyr Asp Pro Leu Tyr His Pro Ser Met Phe
                85                  90                  95
Cys Ala Gly Gly Gly Gln Xaa Gln Xaa Asp Ser Cys Asn Gly Asp Ser
            100                 105                 110
Gly Gly Pro Leu Ile Cys Asn Gly Tyr Leu Gln Gly Leu Val Ser Phe
            115                 120                 125
Gly Lys Ala Pro Cys Gly Gln Val Gly Val Pro Gly Val Tyr Thr Asn
        130                 135                 140
Leu Cys Lys Phe Thr Glu Trp Ile Glu Lys Thr Val Gln Ala Ser
145                 150                 155
```

        <210> 173
        <211> 1265
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(1265)
        <223> n = A,T,C or G

        <400> 173
```
ggcagcccgc actcgcagcc ctggcaggcg gcactggtca tggaaaacga attgttctgc    60
tcgggcgtcc tggtgcatcc gcagtgggtg ctgtcagccg cacactgttt ccagaactcc   120
tacaccatcg ggctgggcct gcacagtctt gaggccgacc aagagccagg gagccagatg   180
gtggaggcca gcctctccgt acggcaccca gagtacaaca gacccttgct cgctaacgac   240
ctcatgctca tcaagttgga cgaatccgtg tccgagtctg acaccatccg gagcatcagc   300
attgcttcgc agtgccctac cgcggggaac tcttgcctcg tttctggctg gggtctgctg   360
gcgaacggtg agctcacggg tgtgtgtctg ccctcttcaa ggaggtcctc tgcccagtcg   420
cggggctga cccagagctc tgcgtccag gcagaatgcc taccgtgctg cagtgcgtga   480
acgtgtcggt ggtgtctgag gaggtctgca gtaagctcta tgacccgctg taccacccca   540
gcatgttctg cgccggcgga gggcaagacc agaaggactc ctgcaacggt gactctgggg   600
ggcccctgat ctgcaacggg tacttgcagg gccttgtgtc tttcggaaaa gccccgtgtg   660
gccaagttgg cgtgccaggt gtctacacca acctctgcaa attcactgag tggatagaga   720
aaaccgtcca ggccagttaa ctctggggac tgggaaccca tgaaattgac ccccaaatac   780
atcctgcgga aggaattcag gaatatctgt tcccagcccc tcctccctca ggcccaggag   840
tccaggcccc cagcccctcc tccctcaaac caagggtaca gatccccagc ccctcctccc   900
tcagacccag gagtccagac cccccagccc ctcctccctc agacccagga gtccagcccc   960
tcctccntca gacccaggag tccagacccc ccagcccctc tccctcaga cccagggggtt  1020
gaggccccca acccctcctc cttcagagtc agaggtccaa gcccccaacc cctcgttccc  1080
cagacccaga ggtnnaggtc ccagcccctc ttccntcaga cccagnggtc caatgccacc  1140
tagattttcc ctgnacacag tgccccctg tggnangttg acccaacctt accagttggt  1200
ttttcatttt tngtcccttt ccctagatc cagaaataaa gtttaagaga ngngcaaaaa  1260
aaaaa                                                             1265
```

        <210> 174
        <211> 1459
        <212> DNA

```
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(1459)
        <223> n = A,T,C or G

        <400> 174
ggtcagccgc acactgtttc cagaagtgag tgcagagctc ctacaccatc gggctgggcc      60
tgcacagtct tgaggccgac caagagccag ggagccagat ggtggaggcc agcctctccg     120
tacggcaccc agagtacaac agacccttgc tcgctaacga cctcatgctc atcaagttgg     180
acgaatccgt gtccgagtct gacaccatcc ggagcatcag cattgcttcg cagtgcccta     240
ccgcggggaa ctcttgcctc gtttctggct ggggtctgct ggcgaacggt gagctcacgg     300
gtgtgtgtct gccctcttca aggaggtcct ctgcccagtc gcggggggctg acccagagct     360
ctgcgtccca ggcagaatgc ctaccgtgct gcagtgcgtg aacgtgtcgg tggtgtctga     420
ngaggtctgc antaagctct atgacccgct gtaccacccc ancatgttct cgcgccggcgg     480
agggcaagac cagaaggact cctgcaacgt gagagagggg aaaggggagg gcaggcgact     540
cagggaaggg tggagaaggg ggagacagag acacacaggg ccgcatggcg agatgcagag     600
atggagagac acacagggag acagtgacaa ctagagagag aaactgagag aaacagagaa     660
ataaacacag gaataaagag aagcaaagga agagagaaac agaaacagac atggggaggc     720
agaaacacac acacatagaa atgcagttga ccttccaaca gcatgggggcc tgagggcggt     780
gacctccacc caatagaaaa tcctcttata acttttgact ccccaaaaac ctgactagaa     840
atagcctact gttgacgggg agccttacca ataacataaa tagtcgattt atgcatacgt     900
tttatgcatt catgatatac ctttgttgga attttttgat atttctaagc tacacagttc     960
gtctgtgaat ttttttaaat tgttgcaact ctcctaaaat ttttctgatg tgtttattga    ·1020
aaaaatccaa gtataagtgg acttgtgcat tcaaaccagg gttgttcaag ggtcaactgt    1080
gtacccagag ggaaacagtg acacagattc atagaggtga aacacgaaga gaaacaggaa    1140 .
aaatcaagac tctacaaaga ggctgggcag ggtggctcat gcctgtaatc ccagcacttt    1200
gggaggcgag gcaggcagat cacttgaggt aaggagttca agaccagcct ggccaaaatg    1260
gtgaaatcct gtctgtacta aaaatacaaa agttagctgg atatggtggc aggcgcctgt    1320
aatcccagct acttgggagg ctgaggcagg agaattgctt gaatatggga ggcagaggtt    1380
gaagtgagtt ·gagatcacac cactatactc cagctggggc aacagagtaa gactctgtct    1440
caaaaaaaaa aaaaaaaaa                                                  1459

        <210> 175
        <211> 1167
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(1167)
        <223> n = A,T,C or G

        <400> 175
gcgcagccct ggcaggcggc actggtcatg gaaaacgaat tgttctgctc gggcgtcctg      60 .
gtgcatccgc agtgggtgct gtcagccgca cactgtttcc agaactccta caccatcggg     120
ctgggcctgc ·acagtcttga ggccgaccaa gagccaggga gccagatggt ggaggccagc     180
ctctccgtac ggcacccaga gtacaacaga ctcttgctcg ctaacgacct catgctcatc     240
aagttggacg aatccgtgtc cgagtctgac accatccgga gcatcagcat tgcttcgcag     300
tgccctaccg cggggaactc ttgcctcgtn tctggctggg gtctgctggc gaacggcaga     360
atgcctaccg tgctgcactg cgtgaacgtg tcggtggtgt ctgaggangt ctgcagtaag     420
ctctatgacc cgctgtacca ccccagcatg ttctgcgccg cggagggca agaccagaag     480
gactcctgca cggtgactc tggggggccc ctgatctgca cgggtactt gcagggcctt     540
gtgtctttcg aaaagccccc gtgtggccaa cttggcgtgc caggtgtcta caccaacctc     600
tgcaaattca ctgagtggat agagaaaacc gtccagncca gttaactctg gggactggga     660
acccatgaaa ttgacccca aatacatcct gcggaangaa ttcaggaata tctgttccca     720
gcccctcctc cctcaggccc aggagtccag gcccccagcc cctcctccct caaaccaagg     780
```

```
gtacagatcc ccagcccctc ctccctcaga cccaggagtc cagaccccc agccctcnt      840
ccntcagacc caggagtcca gcccctcctc cntcagacgc aggagtccag accccccagc   900
ccntcntccg tcagacccag gggtgcaggc ccccaacccc tcntccntca gagtcagagg   960
tccaagcccc caaccccctcg ttccccagac ccagaggtnc aggtcccagc ccctcctccc   1020
tcagacccag cggtccaatg ccacctagan tntccctgta cacagtgccc ccttgtggca   1080
ngttgaccca accttaccag ttggttttc attttttgtc cctttcccct agatccagaa   1140
ataaagtnta agagaagcgc aaaaaaa                                       1167
```

<210> 176
<211> 205
<212> PRT
<213> Homo sapien

<220>
<221> VARIANT
<222> (1)...(205)
<223> Xaa = Any Amino Acid

<400> 176

```
Met Glu Asn Glu Leu Phe Cys Ser Gly Val Leu Val His Pro Gln Trp
1               5                   10                  15
Val Leu Ser Ala Ala His Cys Phe Gln Asn Ser Tyr Thr Ile Gly Leu
            20                  25                  30
Gly Leu His Ser Leu Glu Ala Asp Gln Glu Pro Gly Ser Gln Met Val
        35                  40                  45
Glu Ala Ser Leu Ser Val Arg His Pro Glu Tyr Asn Arg Leu Leu Leu
    50                  55                  60
Ala Asn Asp Leu Met Leu Ile Lys Leu Asp Glu Ser Val Ser Glu Ser
65                  70                  75                  80
Asp Thr Ile Arg Ser Ile Ser Ile Ala Ser Gln Cys Pro Thr Ala Gly
                85                  90                  95
Asn Ser Cys Leu Val Ser Gly Trp Gly Leu Leu Ala Asn Gly Arg Met
            100                 105                 110
Pro Thr Val Leu His Cys Val Asn Val Ser Val Val Ser Glu Xaa Val
        115                 120                 125
Cys Ser Lys Leu Tyr Asp Pro Leu Tyr His Pro Ser Met Phe Cys Ala
    130                 135                 140
Gly Gly Gly Gln Asp Gln Lys Asp Ser Cys Asn Gly Asp Ser Gly Gly
145                 150                 155                 160
Pro Leu Ile Cys Asn Gly Tyr Leu Gln Gly Leu Val Ser Phe Gly Lys
                165                 170                 175
Ala Pro Cys Gly Gln Leu Gly Val Pro Gly Val Tyr Thr Asn Leu Cys
            180                 185                 190
Lys Phe Thr Glu Trp Ile Glu Lys Thr Val Gln Xaa Ser
    195                 200                 205
```

<210> 177
<211> 1119
<212> DNA
<213> Homo sapien

<400> 177

```
gcgcactcgc agccctggca ggcggcactg gtcatggaaa acgaattgtt ctgctcgggc    60
gtcctggtgc atccgcagtg ggtgctgtca gccgcacact gtttccagaa ctcctacacc   120
atcgggctgg gcctgcacag tcttgaggcc gaccaagagc caggagcca gatggtggag    180
gccagcctct ccgtacggca cccagagtac aacagaccct gctcgctaa cgacctcatg    240
ctcatcaagt tggacgaatc cgtgtccgag tctgacacca tccggagcat cagcattgct   300
tcgcagtgcc ctaccgcggg gaactcttgc ctcgtttctg ctggggtct gctggcgaac    360
```

```
gatgctgtga ttgccatcca gtcccagact gtgggaggct gggagtgtga gaagctttcc    420
caaccctggc agggttgtac catttcggca acttccagtg caaggacgtc ctgctgcatc    480
ctcactgggt gctcactact gctcactgca tcacccggaa cactgtgatc aactagccag    540
caccatagtt ctccgaagtc agactatcat gattactgtg ttgactgtgc tgtctattgt    600
actaaccatg ccgatgttta ggtgaaatta gcgtcacttg ccctcaacca tcttggtatc    660
cagttatcct cactgaattg agatttcctg cttcagtgtc agccattccc acataatttc    720
tgacctacag aggtgaggga tcatatagct cttcaaggat gctggtactc ccctcacaaa    780
ttcatttctc ctgttgtagt gaaaggtgcg ccctctggag cctcccaggg tgggtgtgca    840
ggtcacaatg atgaatgtat gatcgtgttc ccattaccca aagcctttaa atccctcatg    900
ctcagtacac cagggcaggt ctagcatttc ttcatttagt gtatgctgtc cattcatgca    960
accacctcag gactcctgga ttctctgcct agttgagctc ctgcatgctg cctccttggg   1020
gaggtgaggg agagggccca tggttcaatg ggatctgtgc agttgtaaca cattaggtgc   1080
ttaataaaca gaagctgtga tgttaaaaaa aaaaaaaaa                          1119
```

<210> 178
<211> 164
<212> PRT
<213> Homo sapien

<220>
<221> VARIANT
<222> (1)...(164)
<223> Xaa = Any Amino Acid

<400> 178

```
Met Glu Asn Glu Leu Phe Cys Ser Gly Val Leu Val His Pro Gln Trp
1               5                   10                  15
Val Leu Ser Ala Ala His Cys Phe Gln Asn Ser Tyr Thr Ile Gly Leu
            20                  25                  30
Gly Leu His Ser Leu Glu Ala Asp Gln Glu Pro Gly Ser Gln Met Val
            35                  40                  45
Glu Ala Ser Leu Ser Val Arg His Pro Glu Tyr Asn Arg Pro Leu Leu
        50                  55                  60
Ala Asn Asp Leu Met Leu Ile Lys Leu Asp Glu Ser Val Ser Glu Ser
65                  70                  75                  80
Asp Thr Ile Arg Ser Ile Ser Ile Ala Ser Gln Cys Pro Thr Ala Gly
                85                  90                  95
Asn Ser Cys Leu Val Ser Gly Trp Gly Leu Leu Ala Asn Asp Ala Val
            100                 105                 110
Ile Ala Ile Gln Ser Xaa Thr Val Gly Gly Trp Glu Cys Glu Lys Leu
        115                 120                 125
Ser Gln Pro Trp Gln Gly Cys Thr Ile Ser Ala Thr Ser Ser Ala Arg
        130                 135                 140
Thr Ser Cys Cys Ile Leu Thr Gly Cys Ser Leu Leu Leu Thr Ala Ser
145                 150                 155                 160
Pro Gly Thr Leu
```

<210> 179
<211> 250
<212> DNA
<213> Homo sapien

<400> 179

```
ctggagtgcc ttggtgtttc aagcccctgc aggaagcaga atgcaccttc tgaggcacct     60
ccagctgccc ccggccgggg gatgcgaggc tcggagcacc cttgcccggc tgtgattgct    120
gccaggcact gttcatctca gcttttctgt ccctttgctc ccggcaagcg cttctgctga    180
aagttcatat ctggagcctg atgtcttaac gaataaaggt cccatgctcc acccgaaaaa    240
```

```
aaaaaaaaaa                                          '                      250

        <210> 180
        <211> 202
        <212> DNA
        <213> Homo sapien

        <400> 180
actagtccag tgtggtggaa ttccattgtg ttgggcccaa cacaatggct acctttaaca        60
tcacccagac cccgcccctg cccgtgcccc acgctgctgc taacgacagt atgatgctta       120
ctctgctact cggaaactat ttttatgtaa ttaatgtatg ctttcttgtt tataaatgcc       180
tgatttaaaa aaaaaaaaaa aa                                                202

        <210> 181
        <211> 558
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(558)
        <223> n = A,T,C or G

        <400> 181
tccytttgkt naggtttkkg agacamccck agacctwaan ctgtgtcaca gacttcyngg        60
aatgtttagg cagtgctagt aatttcytcg taatgattct gttattactt tcctnattct       120
ttattcctct ttcttctgaa gattaatgaa gttgaaaatt gaggtggata aatacaaaaa       180
ggtagtgtga tagtataagt atctaagtgc agatgaaagt gtgttatata tatccattca       240
aaattatgca agttagtaat tactcagggt taactaaatt actttaatat gctgttgaac       300
ctactctgtt ccttggctag aaaaaattat aaacaggact ttgttagttt gggaagccaa       360
attgataata ttctatgttc taaagttgg gctatacata aattattaag aaatatggaw       420
ttttattccc aggaatatgg kgttcatttt atgaatatta cscrggatag awgtwtgagt       480
aaaaycagtt ttggtwaata ygtwaatatg tcmtaaataa acaakgcttt gacttatttc       540
caaaaaaaaa aaaaaaaa                                                     558

        <210> 182
        <211> 479
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(479)
        <223> n = A,T,C or G

        <400> 182
acagggwttk grggatgcta agsccccrga rwtygtttga tccaaccctg gcttwttttc        60
agaggggaaa atggggccta gaagttacag mscatytagy tggtgcgmtg gcacccctgg       120
cstcacacag astcccgagt agctgggact acaggcacac agtcactgaa gcaggccctg       180
ttwgcaattc acgttgccac ctccaactta aacattcttc atatgtgatg tccttagtca       240
ctaaggttaa actttcccac ccagaaaagg caacttagat aaaatcttag agtactttca       300
tactmttcta agtcctcttc cagcctcact kkgagtcctm cytgggggtt gataggaant       360
ntctcttggc tttctcaata aartctctat ycatctcatg tttaatttgg tacgcatara       420
awtgstgara aaattaaaat gttctggtty mactttaaaa araaaaaaaa aaaaaaaaa       479

        <210> 183
        <211> 384
        <212> DNA
```

65

<213> Homo sapien

<400> 183
aggcgggagc agaagctaaa gccaaagccc aagaagagtg gcagtgccag cactggtgcc   60
agtaccagta ccaataacag tgccagtgcc agtgccagca ccagtggtgg cttcagtgct   120
ggtgccagcc tgaccgccac tctcacattt gggctcttcg ctggccttgg tggagctggt   180
gccagcacca gtggcagctc tggtgcctgt ggtttctcct acaagtgaga ttttagatat   240
tgttaatcct gccagtcttt ctcttcaagc cagggtgcat cctcagaaac ctactcaaca   300
cagcactcta ggcagccact atcaatcaat tgaagttgac actctgcatt aratctattt   360
gccatttcaa aaaaaaaaa aaaa   384

          <210> 184
          <211> 496
          <212> DNA
          <213> Homo sapien

          <220>
          <221> misc_feature
          <222> (1)...(496)
          <223> n = A,T,C or G

          <400> 184
accgaattgg gaccgctggc ttataagcga tcatgtyynt ccrgtatkac ctcaacgagc   60
agggagatcg agtctatacg ctgaagaaat ttgacccgat gggacaacag acctgctcag   120
cccatcctgc tcggttctcc ccagatgaca aatactctsg acaccgaatc accatcaaga   180
aacgcttcaa ggtgctcatg acccagcaac cgcgccctgt.cctctgaggg tcccttaaac   240
tgatgtcttt tctgccacct gttacccctc ggagactccg taaccaaact cttcggactg   300
tgagccctga tgcctttttg ccagccatac tctttggcat ccagtctctc gtggcgattg   360
attatgcttg tgtgaggcaa tcatggtggc atcacccata aagggaacac atttgacttt   420
tttttctcat attttaaatt actacmagaw tattwmagaw waaatgawtt gaaaaactst   480
taaaaaaaaa aaaaaa   496

          <210> 185
          <211> 384
          <212> DNA
          <213> Homo sapien

          <400> 185
gctggtagcc tatggcgkgg cccacggagg ggctcctgag gccacggrac agtgacttcc   60
caagtatcyt gcgcsgcgtc ttctaccgtc cctacctgca gatcttcggg cagattcccc   120
aggaggacat ggacgtggcc ctcatggagc acagcaactg ytcgtcggag cccggcttct   180
gggcacaccc tcctggggcc caggcgggca cctgcgtctc ccagtatgcc aactggctgg   240
tggtgctgct cctcgtcatc ttcctgctcg tggccaacat cctgctggtc aacttgctca   300
ttgccatgtt cagttacaca ttcggcaaag tacagggcaa cagcgatctc tactgggaag   360
gcgcagcgtt accgcctcat ccgg   384

          <210> 186
          <211> 577
          <212> DNA
          <213> Homo sapien

          <220>
          <221> misc_feature
          <222> (1)...(577)
          <223> n = A,T,C or G

          <400> 186
gagttagctc ctccacaacc ttgatgaggt cgtctgcagt ggcctctcgc ttcataccgc   60

```
tnccatcgtc atactgtagg tttgccacca cytcctggca tcttggggcg gcntaatatt      120
ccaggaaact ctcaatcaag tcaccgtcga tgaaacctgt gggctggttc tgtcttccgc      180
tcggtgtgaa aggatctccc agaaggagtg ctcgatcttc cccacacttt tgatgacttt      240
attgagtcga ttctgcatgt ccagcaggag gttgtaccag ctctctgaca gtgaggtcac      300
cagccctatc atgccgttga mcgtgccgaa garcaccgag ccttgtgtgg gggkkgaagt      360
ctcacccaga ttctgcatta ccagagagcc gtggcaaaag acattgacaa actcgcccag      420
gtggaaaaag amcamctcct ggargtgctn gccgctcctc gtcmgttggt ggcagcgctw      480
tccttttgac acacaaacaa gttaaaggca ttttcagccc ccagaaantt gtcatcatcc      540
aagatntcgc acagcactna tccagttggg attaaat                              577
```

        <210> 187
        <211> 534
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(534)
        <223> n = A,T,C or G

        <400> 187
```
aacatcttcc tgtataatgc tgtgtaatat cgatccgatn ttgtctgstg agaatycatw       60
actkggaaaa gmaacattaa agcctggaca ctggtattaa aattcacaat atgcaacact      120
ttaaacagtg tgtcaatctg ctcccyynac tttgtcatca ccagtctggg aakaagggta      180
tgccctattc acacctgtta aaaggcgct aagcatttt gattcaacat cttttttttt      240
gacacaagtc cgaaaaaagc aaaagtaaac agttatyaat ttgttagcca attcactttc      300
ttcatgggac agagccatyt gatttaaaaa gcaaattgca taatattgag cttygggagc      360
tgatatttga gcggaagagt agcctttcta cttcaccaga cacaactccc tttcatattg      420
ggatgttnac naaagtwatg tctctwacag atgggatgct tttgtggcaa ttctgttctg      480
aggatctccc agtttatta ccacttgcac aagaaggcgt tttcttcctc aggc            534
```

        <210> 188
        <211> 761
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(761)
        <223> n = A,T,C or G

        <400> 188
```
agaaaccagt atctctnaaa acaacctctc ataccttgtg gacctaattt tgtgtgcgtg       60
tgtgtgtgcg cgcatattat atagacaggc acatcttttt tacttttgta aaagcttatg      120
cctctttggt atctatatct gtgaaagttt taatgatctg ccataatgtc ttggggacct      180
ttgtcttctg tgtaaatggt actagagaaa acacctatnt tatgagtcaa tctagttngt      240
tttattcgac atgaaggaaa tttccagatn acaacactna caaactctcc ctkgackarg      300
ggggacaaag aaaagcaaaa ctgamcataa raaacaatwa cctggtgaga arttgcataa      360
acagaaatwr ggtagtatat tgaarnacag catcattaaa rmgttwtktt wttctccctt      420
gcaaaaaaca tgtacngact tcccgttgag taatgccaag ttgttttttt tatnataaaa      480
cttgcccttc attacatgtt tnaaagtggt gtggtgggcc aaaatattga aatgatggaa      540
ctgactgata aagctgtaca aataagcagt gtgcctaaca agcaacacag taatgttgac      600
atgcttaatt cacaaatgct aatttcatta taaatgtttg ctaaaataca cttttgaacta      660
tttttctgtn ttcccagagc tgagatntta gattttatgt agtatnaagt gaaaaantac      720
gaaaataata acattgaaga aaaananaaa aaanaaaaaa a                          761
```

        <210> 189
        <211> 482

```
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(482)
<223> n = A,T,C or G

<400> 189
ttttttttttt tttgccgatn ctactatttt attgcaggan gtgggggtgt atgcaccgca    60
caccggggct atnagaagca agaaggaagg agggagggca cagccccttg ctgagcaaca   120
aagccgcctg ctgccttctc tgtctgtctc ctggtgcagg cacatgggga gaccttcccc   180
aaggcagggg ccaccagtcc aggggtggga atacaggggg tgggangtgt gcataagaag   240
tgataggcac aggccacccg gtacagaccc ctcggctcct gacaggtnga tttcgaccag   300
gtcattgtgc cctgcccagg cacagcgtan atctggaaaa gacagaatgc tttccttttc   360
aaatttggct ngtcatngaa ngggcanttt tccaanttng gctnggtctt ggtacncttg   420
gttcggccca gctccncgtc caaaaantat tcacccnnct ccnaattgct tgcnggnccc   480
cc                                                                   482

<210> 190
<211> 471
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(471)
<223> n = A,T,C or G

<400> 190
ttttttttttt ttttaaaaca gttttttcaca acaaaattta ttagaagaat agtggttttg    60
aaaactctcg catccagtga gaactaccat acaccacatt acagctngga atgtnctcca   120
aatgtctggt caaatgatac aatggaacca ttcaatctta cacatgcacg aaagaacaag   180
cgcttttgac atacaatgca caaaaaaaaa agggggggggg gaccacatgg attaaaattt   240
taagtactca tcacatacat taagacacag ttctagtcca gtcnaaaatc agaactgcnt   300
tgaaaaattt catgtatgca atccaaccaa agaacttnat tggtgatcat gantnctcta   360
ctacatcnac cttgatcatt gccaggaacn aaaagttnaa ancacncgt acaaaaanaa     420
tctgtaattn anttcaacct ccgtacngaa aaatnttnnt tatacactcc c             471

<210> 191
<211> 402
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(402)
<223> n = A,T,C or G

<400> 191
gagggattga aggtctgttc tastgtcggm ctgttcagcc accaactcta acaagttgct    60
gtcttccact cactgtctgt aagctttttta acccagacwg tatcttcata aatagaacaa   120
attcttcacc agtcacatct tctaggacct ttttggattc agttagtata agctcttcca   180
cttcctttgt taagacttca tctggtaaag tcttaagttt tgtagaaagg aattyaattg   240
ctcgttctct aacaatgtcc tctccttgaa gtatttggct gaacaaccca cctaaagtcc   300
ctttgtgcat ccattttaaa tatacttaat agggcattgk tncactaggt taaattctgc   360
aagagtcatc tgtctgcaaa agttgcgtta gtatatctgc ca                       402
```

```
<210> 192
<211> 601
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(601)
<223> n = A,T,C or G

<400> 192
gagctcggat ccaataatct ttgtctgagg gcagcacaca tatncagtgc catggnaact      60
ggtctacccc acatgggagc agcatgccgt agntatataa ggtcattccc tgagtcagac     120
atgcytyttt gaytaccgtg tgccaagtgc tggtgattct yaacacacyt ccatcccgyt     180
cttttgtgga aaaactggca cttktctgga actagcarga catcacttac aaattcaccc     240
acgagacact tgaaaggtgt aacaaagcga ytcttgcatt gcttttttgtc cctccggcac     300
cagttgtcaa tactaacccg ctggtttgcc tccatcacat ttgtgatctg tagctctgga     360
tacatctcct gacagtactg aagaacttct tcttttgttt caaaagcarc tcttggtgcc     420
tgttggatca ggttcccatt tcccagtcyg aatgttcaca tggcatattt wacttcccac     480
aaaacattgc gatttgaggc tcagcaacag caaatcctgt tccggcattg gctgcaagag     540
cctcgatgta gccggccagc gccaaggcag gcgccgtgag ccccaccagc agcagaagca     600
g                                                                     601

<210> 193
<211> 608
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(608)
<223> n = A,T,C or G

<400> 193
atacagccca natcccacca cgaagatgcg cttgttgact gagaacctga tgcggtcact      60
ggtcccgctg tagccccagc gactctccac ctgctggaag cggttgatgc tgcactcytt     120
cccaacgcag gcagmagcgg gsccggtcaa tgaactccay tcgtggcttg gggtkgacgg     180
tkaagtgcag gaagaggctg accacctcgc ggtccaccag gatgcccgac tgtgcgggac     240
ctgcagcgaa actcctcgat ggtcatgagc gggaagcgaa tgaggcccag ggccttgccc     300
agaaccttcc gcctgttctc tggcgtcacc tgcagctgct gccgctgaca ctcggcctcg     360
gaccagcgga caaacggcrt tgaacagccg cacctcacgg atgcccagtg tgtcgcgctc     420
caggammgsc accagcgtgt ccaggtcaat gtcggtgaag ccctccgcgg gtratggcgt     480
ctgcagtgtt tttgtcgatg ttctccaggc acaggctggc cagctgcggt tcatcgaaga     540
gtcgcgcctg cgtgagcagc atgaaggcgt tgtcggctcg cagttcttct tcaggaactc     600
cacgcaat                                                              608

<210> 194
<211> 392
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(392)
<223> n = A,T,C or G

<400> 194
gaacggctgg accttgcctc gcattgtgct tgctggcagg gaataccttg gcaagcagyt      60
```

```
ccagtccgag cagcccccaga ccgctgccgc ccgaagctaa gcctgcctct ggccttcccc    120
tccgcctcaa tgcagaacca gtagtgggag cactgtgttt agagttaaga gtgaacactg    180
tttgatttta cttgggaatt tcctctgtta tatagctttt cccaatgcta atttccaaac    240
aacaacaaca aaataacatg tttgcctgtt aagttgtata aaagtaggtg attctgtatt    300
taaagaaaat attactgtta catatactgc ttgcaatttc tgtatttatt gktnctstgg    360
aaataaatat agttattaaa ggttgtcant cc                                  392
```

        <210> 195
        <211> 502 .
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(502)
        <223> n = A,T,C or G

        <400> 195
```
ccsttkgagg ggtkaggkyc cagttyccga gtggaagaaa caggccagga gaagtgcgtg    60
ccgagctgag gcagatgttc ccacagtgac ccccagagcc stgggstata gtytctgacc    120
cctcncaagg aaagaccacs ttctggggac atgggctgga gggcaggacc tagaggcacc    180
aagggaaggc cccattccgg ggstgttccc cgaggaggaa gggaaggggc tctgtgtgcc    240
ccccasgagg aagaggccct gagtcctggg atcagacacc ccttcacgtg tatccccaca    300
caaatgcaag ctcaccaagg tcccctctca gtcccttcc stacaccctg amcggccact    360
gscscacacc cacccagagc acgccacccg ccatggggar tgtgctcaag gartcgcngg    420
gcarcgtgga catctngtcc cagaaggggg cagaatctcc aatagangga ctgarcmstt    480
gctnanaaaa aaaaanaaaa aa                                             502
```

        <210> 196
        <211> 665
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(665)
        <223> n = A,T,C or G

        <400> 196
```
ggttacttgg tttcattgcc accacttagt ggatgtcatt tagaaccatt ttgtctgctc    60
cctctggaag ccttgcgcag agcggacttt gtaattgttg gagaataact gctgaatttt    120
wagctgtttk gagttgatts gcaccactgc acccacaact tcaatatgaa aacyawttga    180
actwatttat tatcttgtga aaagtataac aatgaaaatt ttgttcatac tgtattkatc    240
aagtatgatg aaaagcaawa gatatatatt cttttattat gttaaattat gattgccatt    300
attaatcggc aaaatgtgga gtgtatgttc ttttcacagt aatatatgcc ttttgtaact    360
tcacttggtt attttattgt aaatgartta caaaattctt aatttaagar aatggtatgt    420
watatttatt tcattaattt ctttcctkgt ttacgtwaat tttgaaaaga wtgcatgatt    480
tcttgacaga aatcgatctt gatgctgtgg aagtagtttg acccacatcc ctatgagttt    540
ttcttagaat gtataaaggt tgtagcccat cnaacttcaa agaaaaaaat gaccacatac    600
tttgcaatca ggctgaaatg tggcatgctn ttctaattcc aactttataa actagcaaan    660
aagtg                                                               665
```

        <210> 197
        <211> 492
        <212> DNA
        <213> Homo sapien

        <220>

<221> misc_feature
<222> (1)...(492)
<223> n = A,T,C or G

<400> 197
ttttnttttt ttttttttgc aggaaggatt ccatttattg tggatgcatt ttcacaatat   60
atgtttattg gagcgatcca ttatcagtga aaagtatcaa gtgtttataa natttttagg   120
aaggcagatt cacagaacat gctngtcngc ttgcagtttt acctcgtana gatnacagag   180
aattatagtc naaccagtaa acnaggaatt tactttttcaa aagattaaat ccaaactgaa   240
caaaattcta ccctgaaact tactccatcc aaatattgga ataanagtca gcagtgatac   300
attctcttct gaactttaga ttttctagaa aaatatgtaa tagtgatcag gaagagctct   360
tgttcaaaag tacaacnaag caatgttccc ttaccatagg ccttaattca aactttgatc   420
catttcactc ccatcacggg agtcaatgct acctgggaca cttgtatttt gttcatnctg   480
ancntggctt aa   492

<210> 198
<211> 478
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(478)
<223> n = A,T,C or G

<400> 198
tttnttttgn atttcantct gtannaanta ttttcattat gtttattana aaaatatnaa   60
tgtntccacn acaaatcatn ttacntnagt aagaggccan ctacattgta caacatacac   120
tgagtatatt ttgaaaagga caagtttaaa gtanacncat attgccganc atancacatt   180
tatacatggc ttgattgata tttagcacag canaaactga gtgagttacc agaaanaaat   240
natatatgtc aatcngattt aagatacaaa acagatccta tggtacatan catcntgtag   300
gagttgtggc tttatgttta ctgaaagtca atgcagttcc tgtacaaaga gatggccgta   360
agcattctag tacctctact ccatggttaa gaatcgtaca cttatgttta catatgtnca   420
gggtaagaat tgtgttaagt naanttatgg agaggtccan gagaaaaatt tgatncaa   478

<210> 199
<211> 482
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(482)
<223> n = A,T,C or G

<400> 199
agtgacttgt cctccaacaa aaccccttga tcaagtttgt ggcactgaca atcagaccta   60
tgctagttcc tgtcatctat tcgctactaa atgcagactg gaggggacca aaaagggggca   120
tcaactccag ctggattatt ttggagcctg caaatctatt cctacttgta cggactttga   180
agtgattcag tttcctctac ggatgagaga ctggctcaag aatatcctca tgcagcttta   240
tgaagccnac tctgaacacg ctggttatct nagatgagaa ncagagaaat aaagtcnaga   300
aaatttacct ggangaaaag aggctttngg ctggggacca tcccattgaa ccttctctta   360
anggacttta agaanaaact accacatgtn tgtngtatcc tggtgccngg ccgtttantg   420
aacntngacn ncacccttnt ggaatanant cttgacngcn tcctgaactt gctcctctgc   480
ga   482

<210> 200
<211> 270

```
      <212> DNA
      <213> Homo sapien

      <220>
      <221> misc_feature
      <222> (1)...(270)
      <223> n = A,T,C or G

      <400> 200
cggccgcaag tgcaactcca gctggggccg tgcggacgaa gattctgcca gcagttggtc      60
cgactgcgac gacggcggcg gcgacagtcg caggtgcagc gcgggcgcct ggggtcttgc     120
aaggctgagc tgacgccgca gaggtcgtgt cacgtcccac gaccttgacg ccgtcgggga     180
cagccggaac agagcccggt gaangcggga ggcctcgggg agcccctcgg gaagggcggc     240
ccgagagata cgcaggtgca ggtggccgcc                                      270


      <210> 201
      <211> 419
      <212> DNA
      <213> Homo sapien

      <220>
      <221> misc_feature
      <222> (1)...(419)
      <223> n = A,T,C or G

      <400> 201
tttttttttt ttttggaatc tactgcgagc acagcaggtc agcaacaagt ttattttgca      60
gctagcaagg taacagggta gggcatggtt acatgttcag gtcaacttcc tttgtcgtgg     120
ttgattggtt tgtctttatg ggggcggggt ggggtagggg aaancgaagc anaantaaca     180
tggagtgggt gcaccctccc tgtagaacct ggttacnaaa gcttggggca gttcacctgg     240
tctgtgaccg tcattttctt gacatcaatg ttattagaag tcaggatatc ttttagagag     300
tccactgtnt ctggagggag attagggttt cttgccaana tccaancaaa atccacntga     360
aaaagttgga tgatncangt acngaatacc ganggcatan ttctcatant cggtggcca      419


      <210> 202
      <211> 509
      <212> DNA
      <213> Homo sapien

      <220>
      <221> misc_feature
      <222> (1)...(509)
      <223> n = A,T,C or G

      <400> 202
tttntttttt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt      60
tggcacttaa tccattttta tttcaaaatg tctacaaant ttnaatncnc cattatacng     120
gtnattttnc aaaatctaaa nnttattcaa atntnagcca aantccttac ncaaatnnaa     180
tacncncaaa aatcaaaaat atacntntct ttcagcaaac ttngttacat aaattaaaaa     240
aatatatacg gctggtgttt tcaaagtaca attatcttaa cactgcaaac atntttnnaa     300
ggaactaaaa taaaaaaaaa cactnccgca aaggttaaag ggaacaacaa attcntttta     360
caacancnnc nattataaaa atcatatctc aaatcttagg ggaatatata cttcacacng     420
ggatcttaac ttttactnca ctttgtttat tttttanaa ccattgtntt gggcccaaca     480
caatggnaat nccnccncnc tggactagt                                      509


      <210> 203
      <211> 583
      <212> DNA
```

<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(583)
<223> n = A,T,C or G

<400> 203

```
tttttttttt tttttttga cccccctctt ataaaaaaca agttaccatt ttattttact       60
tacacatatt tattttataa ttggtattag atattcaaaa ggcagctttt aaaatcaaac      120
taaatggaaa ctgccttaga tacataattc ttaggaatta gcttaaaatc tgcctaaagt      180
gaaaatcttc tctagctctt ttgactgtaa attttgact cttgtaaaac atccaaattc       240
atttttcttg tctttaaaat tatctaatct ttccattttt tccctattcc aagtcaattt      300
gcttctctag cctcatttcc tagctcttat ctactattag taagtggctt ttttcctaaa      360
agggaaaaca ggaagagana atggcacaca aaacaaacat tttatattca tatttctacc      420
tacgttaata aaatagcatt ttgtgaagcc agctcaaaag aaggcttaga tccttttatg      480
tccattttag tcactaaacg atatcnaaag tgccagaatg caaaaggttt gtgaacattt      540
attcaaaagc taatataaga tatttcacat actcatcttt ctg                        583
```

<210> 204
<211> 589
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(589)
<223> n = A,T,C or G

<400> 204

```
tttttttnt tttttttttt tttttnctc ttcttttttt ttganaatga ggatcgagtt        60
tttcactctc tagatagggc atgaagaaaa ctcatctttc cagctttaaa ataacaatca      120
aatctcttat gctatatcat attttaagtt aaactaatga gtcactggct tatcttctcc      180
tgaaggaaat ctgttcattc ttctcattca tatagttata tcaagtacta ccttgcatat      240
tgagaggttt ttcttctcta tttacacata tatttccatg tgaatttgta tcaaacctttt     300
attttcatgc aaactagaaa ataatgtntt ctttttgcata agagaagaga acaatatnag     360
cattacaaaa ctgctcaaat tgtttgttaa gnttatccat tataattagt tnggcaggag      420
ctaatacaaa tcacatttac ngacnagcaa taataaaact gaagtaccag ttaaatatcc      480
aaaataatta aaggaacatt tttagcctgg gtataattag ctaattcact ttacaagcat      540
ttattnagaa tgaattcaca tgttattatt ccntagccca acacaatgg                  589
```

<210> 205
<211> 545
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(545)
<223> n = A,T,C or G

<400> 205

```
tttttntttt tttttcagt aataatcaga acaatattta tttttatatt taaaattcat        60
agaaaagtgc cttacatta ataaaagttt gtttctcaaa gtgatcagag gaattagata       120
tngtcttgaa caccaatatt aatttgagga aaatacacca aaatacatta agtaaattat       180
ttaagatcat agagcttgta agtgaaaaga taaaatttga cctcagaaac tctgagcatt      240
aaaaatccac tattagcaaa taaattacta tggacttctt gctttaattt tgtgatgaat      300
atggggtgtc actggtaaac caacacattc tgaaggatac attacttagt gatagattct      360
```

```
tatgtacttt gctanatnac gtggatatga gttgacaagt ttctctttct tcaatctttt      420
aaggggcnga ngaaatgagg aagaaaagaa aaggattacg catactgttc tttctatngg      480
aaggattaga tatgtttcct ttgccaatat taaaaaaata ataatgttta ctactagtga      540
aaccc                                                                  545
```

```
    <210> 206
    <211> 487
    <212> DNA
    <213> Homo sapien

    <220>
    <221> misc_feature
    <222> (1)...(487)
    <223> n = A,T,C or G

    <400> 206
tttttttttt tttttagtc aagtttctna tttttattat aattaaagtc ttggtcattt      60
catttattag ctctgcaact tacatattta aattaaagaa acgttnttag acaactgtna     120
caatttataa atgtaaggtg ccattattga gtanatatat tcctccaaga gtggatgtgt     180
cccttctccc accaactaat gaancagcaa cattagttta attttattag tagatnatac     240
actgctgcaa acgctaattc tcttctccat ccccatgtng atattgtgta tatgtgtgag     300
ttggtnagaa tgcatcanca atctnacaat caacagcaag atgaagctag gcntgggctt     360
tcggtgaaaa tagactgtgt ctgtctgaat caaatgatct gacctatcct cggtggcaag     420
aactcttcga accgcttcct caaaggcngc tgccacattt gtggcntctn ttgcacttgt     480
ttcaaaa                                                               487
```

```
    <210> 207
    <211> 332
    <212> DNA
    <213> Homo sapien

    <220>
    <221> misc_feature
    <222> (1)...(332)
    <223> n = A,T,C or G

    <400> 207
tgaattggct aaaagactgc attttanaa ctagcaactc ttatttcttt cctttaaaaa      60
tacatagcat taaatcccaa atcctattta aagacctgac agcttgagaa ggtcactact     120
gcatttatag gaccttctgg tggttctgct gttacntttg aantctgaca atccttgana     180
atctttgcat gcagaggagg taaaaggtat tggatttttca cagaggaana acacagcgca     240
gaaatgaagg ggccaggctt actgagcttg tccactggag ggctcatggg tgggacatgg     300
aaaagaaggc agcctaggcc ctggggagcc ca                                   332
```

```
    <210> 208
    <211> 524
    <212> DNA
    <213> Homo sapien

    <220>
    <221> misc_feature
    <222> (1)...(524)
    <223> n = A,T,C or G

    <400> 208
agggcgtggt gcggagggcg ttactgtttt gtctcagtaa caataaatac aaaaagactg      60
gttgtgttcc ggccccatcc aaccacgaag ttgatttctc ttgtgtgcag agtgactgat     120
tttaaaggac atggagcttg tcacaatgtc acaatgtcac agtgtgaagg gcacactcac     180
```

```
tcccgcgtga ttcacattta gcaaccaaca atagctcatg agtccatact tgtaaatact          240
tttggcagaa tacttnttga aacttgcaga tgataactaa gatccaagat atttcccaaa          300
gtaaatagaa gtgggtcata atattaatta cctgttcaca tcagcttcca tttacaagtc          360
atgagcccag acactgacat caaactaagc ccacttagac tcctcaccac cagtctgtcc          420
tgtcatcaga caggaggctg tcaccttgac caaattctca ccagtcaatc atctatccaa          480
aaaccattac ctgatccact tccggtaatg caccaccttg gtga                           524
```

        <210> 209
        <211> 159
        <212> DNA
        <213> Homo sapien

        <400> 209
```
gggtgaggaa atccagagtt gccatggaga aaattccagt gtcagcattc ttgctccttg          60
tggccctctc ctacactctg gccagagata ccacagtcaa acctggagcc aaaaaggaca         120
caaaggactc tcgacccaaa ctgccccaga ccctctcca                                159
```

        <210> 210
        <211> 256
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(256)
        <223> n = A,T,C or G

        <400> 210
```
actccctggc agacaaaggc agaggagaga gctctgttag ttctgtgttg ttgaactgcc          60
actgaatttc tttccacttg gactattaca tgccanttga gggactaatg gaaaaacgta         120
tggggagatt ttanccaatt tangtntgta aatggggaga ctggggcagg cgggagagat         180
ttgcagggtg naaatgggan ggctggtttg ttanatgaac agggacatag gaggtaggca         240
ccaggatgct aaatca                                                          256
```

        <210> 211
        <211> 264
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(264)
        <223> n = A,T,C or G

        <400> 211
```
acattgtttt tttgagataa agcattgaga gagctctcct taacgtgaca caatggaagg          60
actggaacac atacccacat ctttgttctg agggataatt ttctgataaa gtcttgctgt         120
atattcaagc acatatgtta tatattattc agttccatgt ttatagccta gttaaggaga         180
ggggagatac attcngaaag aggactgaaa gaaatactca agtnggaaaa cagaaaaaga         240
aaaaaaggag caaatgagaa gcct                                                 264
```

        <210> 212
        <211> 328
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature

```
         <222> (1)...(328)
         <223> n = A,T,C or G

         <400> 212
acccaaaaat ccaatgctga atatttggct tcattattcc canattcttt gattgtcaaa      60
ggatttaatg ttgtctcagc ttgggcactt cagttaggac ctaaggatgc cagccggcag     120
gtttatatat gcagcaacaa tattcaagcg cgacaacagg ttattgaact tgcccgccag     180
ttnaatttca ttcccattga cttgggatcc ttatcatcag ccagagagat tgaaaattta     240
cccctacnac tctttactct ctgganaggg ccagtggtgg tagctataag cttggccaca     300
ttttttttc ctttattcct ttgtcaga                                         328


         <210> 213
         <211> 250
         <212> DNA
         <213> Homo sapien


         <220>
         <221> misc_feature
         <222> (1)...(250)
         <223> n = A,T,C or G


         <400> 213
acttatgagc agagcgacat atccnagtgt agactgaata aaactgaatt ctctccagtt      60
taaagcattg ctcactgaag ggatagaagt gactgccagg agggaaagta agccaaggct     120
cattatgcca aagganatat acatttcaat tctccaaact tcttcctcat tccaagagtt     180
ttcaatattt gcatgaacct gctgataanc catgttaana aacaaatatc tctctnacct     240
tctcatcggt                                                            250


         <210> 214
         <211> 444
         <212> DNA
         <213> Homo sapien


         <220>
         <221> misc_feature
         <222> (1)...(444)
         <223> n = A,T,C or G


         <400> 214
acccagaatc caatgctgaa tatttggctt cattattccc agattctttg attgtcaaag      60
gatttaatgt tgtctcagct tgggcacttc agttaggacc taaggatgcc agccggcagg     120
tttatatatg cagcaacaat attcaagcgc gacaacaggt tattgaactt gcccgccagt     180
tgaatttcat tcccattgac ttgggatcct tatcatcagc canagagatt gaaaatttac     240
ccctacgact ctttactctc tggagagggc cagtggtggt agctataagc ttggccacat     300
ttttttttcc tttattcctt tgtcagagat gcgattcatc catatgctan aaaccaacag     360
agtgactttt acaaaattcc tataganatt gtgaataaaa ccttacctat agttgccatt     420
actttgctct ccctaatata cctc                                            444


         <210> 215
         <211> 366
         <212> DNA
         <213> Homo sapien


         <220>
         <221> misc_feature
         <222> (1)...(366)
         <223> n = A,T,C or G
```

```
<400> 215
acttatgagc agagcgacat atccaagtgt anactgaata aaactgaatt ctctccagtt          60
taaagcattg ctcactgaag ggatagaagt gactgccagg agggaaagta agccaaggct         120
cattatgcca aagganatat acatttcaat tctccaaact tcttcctcat tccaagagtt         180
ttcaatattt gcatgaacct gctgataagc catgttgaga aacaaatatc tctctgacct         240
tctcatcggt aagcagaggc tgtaggcaac atggaccata gcgaanaaaa aacttagtaa         300
tccaagctgt tttctacact gtaaccaggt ttccaaccaa ggtggaaatc tcctatactt         360
ggtgcc                                                                    366


      <210> 216
      <211> 260
      <212> DNA
      <213> Homo sapien

      <220>
      <221> misc_feature
      <222> (1)...(260)
      <223> n = A,T,C or G

      <400> 216
ctgtataaac agaactccac tgcangaggg agggccgggc caggagaatc tccgcttgtc          60
caagacaggg gcctaaggag ggtctccaca ctgctnntaa·gggctnttnc attttttttat       120
taataaaaag tnnaaaaggc ctcttctcaa ctttttttccc ttnggctgga aaatttaaaa       180
atcaaaaatt tcctnaagtt ntcaagctat catatatact ntatcctgaa aaagcaacat        240
aattcttcct tccctccttt                                                     260


      <210> 217
      <211> 262
      <212> DNA
      <213> Homo sapien

      <220>
      <221> misc_feature
      <222> (1)...(262)
      <223> n = A,T,C or G

      <400> 217
acctacgtgg gtaagtttan aaatgttata atttcaggaa naggaacgca tataattgta          60
tcttgcctat aattttctat tttaataagg aaatagcaaa ttggggtggg gggaatgtag         120
ggcattctac agtttgagca aaatgcaatt aaatgtggaa ggacagcact gaaaaatttt         180
atgaataatc tgtatgatta tatgtctcta gagtagattt ataattagcc acttacccta        240
atatccttca tgcttgtaaa gt                                                   262


      <210> 218
      <211> 205
      <212> DNA
      <213> Homo sapien

      <220>
      <221> misc_feature
      <222> (1)...(205)
      <223> n = A,T,C or G

      <400> 218
accaaggtgg tgcattaccg gaantggatc aangacacca tcgtggccaa cccctgagca          60
cccctatcaa ctcccttttg tagtaaactt ggaaccttgg aaatgaccag gccaagactc         120
aggcctcccc agttctactg acctttgtcc·ttangtntna ngtccagggt tgctaggaaa         180
anaaatcagc agacacaggt gtaaa                                                205
```

```
            <210> 219
            <211> 114
            <212> DNA
            <213> Homo sapien

            <400> 219
tactgttttg tctcagtaac aataaataca aaaagactgg ttgtgttccg gccccatcca      60
accacgaagt tgatttctct tgtgtgcaga gtgactgatt ttaaaggaca tgga           114

            <210> 220
            <211> 93
            <212> DNA
            <213> Homo sapien

            <400> 220
actagccagc acaaaaggca gggtagcctg aattgctttc tgctctttac atttctttta      60
aaataagcat ttagtgctca gtccctactg agt                                   93

            <210> 221
            <211> 167
            <212> DNA
            <213> Homo sapien

            <220>
            <221> misc_feature
            <222> (1)...(167)
            <223> n = A,T,C or G

            <400> 221
actangtgca ggtgcgcaca aatatttgtc gatattccct tcatcttgga ttccatgagg      60
tcttttgccc agcctgtggc tctactgtag taagtttctg ctgatgagga gccagnatgc     120
cccccactac cttccctgac gctccccana aatcacccaa cctctgt                   167

            <210> 222
            <211> 351
            <212> DNA
            <213> Homo sapien

            <400> 222
agggcgtggt gcggagggcg gtactgacct cattagtagg aggatgcatt ctggcacccc      60
gttcttcacc tgtcccccaa tccttaaaag gccatactgc ataaagtcaa caacagataa     120
atgtttgctg aattaaagga tggatgaaaa aaattaataa tgaatttttg cataatccaa     180
ttttctcttt tatatttcta gaagaagttt ctttgagcct attagatccc gggaatcttt     240
taggtgagca tgattagaga gcttgtaggt tgcttttaca tatatctggc atatttgagt     300
ctcgtatcaa aacaatagat tggtaaaggt ggtattattg tattgataag t             351

            <210> 223
            <211> 383
            <212> DNA
            <213> Homo sapien

            <220>
            <221> misc_feature
            <222> (1)...(383)
            <223> n = A,T,C or G

            <400> 223
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aaaacaaaca aacaaaaaaa acaattcttc attcagaaaa attatcttag ggactgatat    60
tggtaattat ggtcaattta atwrtrttkt ggggcatttc cttacattgt cttgacaaga   120
ttaaaatgtc tgtgccaaaa ttttgtattt tatttggaga cttcttatca aaagtaatgc   180
tgccaaagga agtctaagga attagtagtg ttcccmtcac ttgtttggag tgtgctattc   240
taaaagattt tgatttcctg gaatgacaat tatattttaa ctttggtggg ggaaanagtt   300
ataggaccac agtcttcact tctgatactt gtaaattaat cttttattgc acttgttttg   360
accattaagc tatatgttta aaa                                           383
```

        <210> 224
        <211> 320
        <212> DNA
        <213> Homo sapien

        <400> 224
```
cccctgaagg cttcttgtta gaaaatagta cagttacaac caataggaac aacaaaaaga    60
aaaagtttgt gacattgtag tagggagtgt gtaccccta ctccccatca aaaaaaaaat   120
ggatacatgg ttaaaggata raagggcaat attttatcat atgttctaaa agagaaggaa   180
gagaaaatac tactttctcr aaatggaagc ccttaaaggt gctttgatac tgaaggacac   240
aaatgtggcc gtccatcctc ctttaragtt gcatgacttg gacacggtaa ctgttgcagt   300
tttaractcm gcattgtgac                                               320
```

        <210> 225
        <211> 1214
        <212> DNA
        <213> Homo sapien

        <400> 225
```
gaggactgca gcccgcactc gcagccctgg caggcggcac tggtcatgga aaacgaattg    60
ttctgctcgg gcgtcctggt gcatccgcag tgggtgctgt cagccgcaca ctgtttccag   120
aactcctaca ccatcgggct gggcctgcac agtcttgagg ccgaccaaga gccagggagc   180
cagatggtgg aggccagcct ctccgtacgg cacccagagt acaacagacc cttgctcgct   240
aacgacctca tgctcatcaa gttggacgaa tccgtgtccg agtctgacac catccggagc   300
atcagcattg cttcgcagtg ccctaccgcg gggaactctt gcctcgtttc tggctggggt   360
ctgctggcga acggcagaat gcctaccgtg ctgcagtgcg tgaacgtgtc ggtggtgtct   420
gaggaggtct gcagtaagct ctatgacccg ctgtaccacc cagcatgtt ctgcgccggc    480
ggagggcaag accagaagga ctcctgcaac ggtgactctg ggggcccct gatctgcaac     540
gggtacttgc agggccttgt gtctttcgga aaagccccgt gtggccaagt tggcgtgcca    600
ggtgtctaca ccaacctctg caaattcact gagtggatag agaaaccgt ccaggccagt     660
taactctggg gactgggaac ccatgaaatt gacccccaaa tacatcctgc ggaaggaatt    720
caggaatatc tgttcccagc ccctcctccc tcaggcccag gagtccaggc ccccagcccc    780
tcctccctca aaccaagggt acagatcccc agcccctcct ccctcagacc caggagtcca    840
gacccccag cccctcctcc ctcagaccca ggagtccagc ccctcctccc tcagacccag     900
gagtccagac cccccagccc ctcctccctc agacccaggg tccaggccc ccaacccctc      960
ctccctcaga ctcagaggtc caagccccca accctccctt ccccagaccc agaggtccag    1020
gtccagccc ctcctccctc agacccagcg gtccaatgcc acctagactc tccctgtaca     1080
cagtgccccc ttgtggcacg ttgacccaac cttaccagtt ggttttcat ttttgtccc     1140
tttcccctag atccagaaat aaagtctaag agaagcgcaa aaaaaaaaa aaaaaaaaa      1200
aaaaaaaaa aaaa                                                      1214
```

        <210> 226
        <211> 119
        <212> DNA
        <213> Homo sapien

        <400> 226
```
acccagtatg tgcagggaga cggaaccccca tgtgacagcc cactccacca gggttcccaa    60
agaacctggc ccagtcataa tcattcatcc tgacagtggc aataatcacg ataaccagt     119
```

```
                       <210> 227
                       <211> 818
                       <212> DNA
                       <213> Homo sapien

                       <400> 227
      acaattcata gggacgacca atgaggacag ggaatgaacc cggctctccc ccagccctga        60
      tttttgctac atatgggggtc ccttttcatt ctttgcaaaa acactgggtt ttctgagaac       120
      acggacggtt cttagcacaa tttgtgaaat ctgtgtaraa ccgggctttg caggggagat        180
      aattttcctc ctctggagga aaggtggtga ttgacaggca gggagacagt gacaaggcta        240
      gagaaagcca cgctcggcct tctctgaacc aggatggaac ggcagacccc tgaaaacgaa        300
      gcttgtcccc ttccaatcag ccacttctga gaaccccccat ctaacttcct actggaaaag       360
      agggcctcct caggagcagt ccaagagttt tcaaagataa cgtgacaact accatctaga        420
      ggaaagggtg caccctcagc agagaagccg agagcttaac tctggtcgtt tccagagaca        480
      acctgctggc tgtcttggga tgcgcccagc ctttgagagg ccactacccc atgaacttct        540
      gccatccact ggacatgaag ctgaggacac tgggcttcaa cactgagttg tcatgagagg        600
      gacaggctct gccctcaagc cggctgaggg cagcaaccac tctcctcccc tttctcacgc        660
      aaagccattc ccacaaatcc agaccatacc atgaagcaac gagacccaaa cagtttggct        720
      caagaggata tgaggactgt ctcagcctgg ctttgggctg acaccatgca cacacacaag        780
      gtccacttct aggttttcag cctagatggg agtcgtgt                                818

                       <210> 228
                       <211> 744
                       <212> DNA
                       <213> Homo sapien

                       <400> 228
      actggagaca ctgttgaact tgatcaagac ccagaccacc ccaggtctcc ttcgtgggat        60
      gtcatgacgt ttgacatacc tttggaacga gcctcctcct tggaagatgg aagaccgtgt        120
      tcgtggccga cctggcctct cctggcctgt ttcttaagat gcggagtcac atttcaatgg        180
      taggaaaagt ggcttcgtaa aatagaagag cagtcactgt ggaactacca aatggcgaga        240
      tgctcggtgc acattggggt gctttgggat aaaagattta tgagccaact attctctggc        300
      accagattct aggccagttt gttccactga agcttttccc acagcagtcc acctctgcag        360
      gctggcagct gaatggcttg ccggtggctc tgtggcaaga tcacactgag atcgatgggt        420
      gagaaggcta ggatgcttgt ctagtgttct tagctgtcac gttggctcct tccaggttgg        480
      ccagacggtg ttggccactc ccttctaaaa cacaggcgcc ctcctggtga cagtgacccg        540
      ccgtggtatg ccttggccca ttccagcagt cccagttatg catttcaagt ttgggggtttg       600
      ttctttttcgt taatgttcct ctgtgttgtc agctgtcttc atttcctggg ctaagcagca       660
      ttgggagatg tggaccagag atccactcct taagaaccag tggcgaaaga cactttcttt        720
      cttcactctg aagtagctgg tggt                                               744

                       <210> 229
                       <211> 300
                       <212> DNA
                       <213> Homo sapien

                       <400> 229
      cgagtctggg ttttgtctat aaagtttgat ccctcctttt ctcatccaaa tcatgtgaac        60
      cattacacat cgaaataaaa gaaaggtggc agacttgccc aacgccaggc tgacatgtgc        120
      tgcagggttg ttgtttttta attattattg ttagaaacgt cacccacagt ccctgttaat        180
      ttgtatgtga cagccaactc tgagaaggtc ctattttttcc acctgcagag gatccagtct        240
      cactaggctc ctccttgccc tcacactgga gtctccgcca gtgtgggtgc ccactgacat        300

                       <210> 230
                       <211> 301
                       <212> DNA
                       <213> Homo sapien
```

```
        <400> 230
cagcagaaca aatacaaata tgaagagtgc aaagatctca taaaatctat gctgaggaat      60
gagcgacagt tcaaggagga gaagcttgca gagcagctca agcaagctga ggagctcagg     120
caatataaag tcctggttca cactcaggaa cgagagctga cccagttaag ggagaagttg     180
cgggaaggga gagatgcctc cctctcattg aatgagcatc tccaggccct cctcactccg     240
gatgaaccgg acaagtccca ggggcaggac ctccaagaaa cagacctcgg ccgcgaccac     300
g                                                                     301


        <210> 231
        <211> 301
        <212> DNA
        <213> Homo sapien


        <400> 231
gcaagcacgc tggcaaatct ctgtcaggtc agctccagag aagccattag tcattttagc      60
caggaactcc aagtccacat ccttggcaac tggggacttg cgcaggttag ccttgaggat     120
ggcaacacgg gacttctcat caggaagtgg gatgtagatg agctgatcaa gacggccagg     180
tctgaggatg gcaggatcaa tgatgtcagg ccggttggta ccgccaatga tgaacacatt     240
ttttttgtg gacatgccat ccatttctgt caggatctgg ttgatgactc ggtcagcagc     300
c                                                                     301


        <210> 232
        <211> 301
        <212> DNA
        <213> Homo sapien


        <400> 232
agtaggtatt tcgtgagaag ttcaacacca aaactggaac atagttctcc ttcaagtgtt      60
ggcgacagcg gggcttcctg attctggaat ataactttgt gtaaattaac agccacctat     120
agaagagtcc atctgctgtg aaggagagac agagaactct gggttccgtc gtcctgtcca     180
cgtgctgtac caagtgctgg tgccagcctg ttacctgttc tcactgaaaa tctggctaat     240
gctcttgtgt atcacttctg attctgacaa tcaatcaatc aatggcctag agcactgact     300
g                                                                     301


        <210> 233
        <211> 301
        <212> DNA
        <213> Homo sapien


        <400> 233
atgactgact tcccagtaag gctctctaag gggtaagtag gaggatccac aggatttgag      60
atgctaaggc cccagagatc gtttgatcca accctcttat tttcagaggg gaaaatgggg     120
cctagaagtt acagagcatc tagctggtgc gctggcaccc ctggcctcac acagactccc     180
gagtagctgg gactacaggc acacagtcac tgaagcaggc cctgttagca attctatgcg     240
tacaaattaa catgagatga gtagagactt tattgagaaa gcaagagaaa atcctatcaa     300
c                                                                     301


        <210> 234
        <211> 301
        <212> DNA
        <213> Homo sapien


        <400> 234
aggtcctaca catcgagact catccatgat tgatatgaat ttaaaaatta caagcaaaga      60
cattttattc atcatgatgc tttcttttgt ttcttctttt cgttttcttc tttttctttt     120
tcaatttcag caacatactt ctcaatttct tcaggattta aaatcttgag ggattgatct     180
cgcctcatga cagcaagttc aatgtttttg ccacctgact gaaccacttc caggagtgcc     240
ttgatcacca gcttaatggt cagatcatct gcttcaatgg cttcgtcagt atagttcttc     300
```

t   301

<210> 235
<211> 283
<212> DNA
<213> Homo sapien

<400> 235
tggggctgtg catcaggcgg gtttgagaaa tattcaattc tcagcagaag ccagaatttg   60
aattccctca tctttttaggg aatcatttac caggtttgga gaggattcag acagctcagg   120
tgctttcact aatgtctctg aacttctgtc cctctttgtt catggatagt ccaataaata   180
atgttatctt tgaactgatg ctcataggag agaatataag aactctgagt gatatcaaca   240
ttagggattc aaagaaatat tagatttaag ctcacactgg tca   283

<210> 236
<211> 301
<212> DNA
<213> Homo sapien

<400> 236
aggtcctcca ccaactgcct gaagcacggt taaaattggg aagaagtata gtgcagcata   60
aatactttta aatcgatcag atttccctaa cccacatgca atcttcttca ccagaagagg   120
tcggagcagc atcattaata ccaagcagaa tgcgtaatag ataaatacaa tggtatatag   180
tgggtagacg gcttcatgag tacagtgtac tgtggtatcg taatctggac ttgggttgta   240
aagcatcgtg taccagtcag aaagcatcaa tactcgacat gaacgaatat aaagaacacc   300
a   301

<210> 237 .
<211> 301
<212> DNA
<213> Homo sapien

<400> 237
cagtggtagt ggtggtggac gtggcgttgg tcgtggtgcc tttttttggtg cccgtcacaa   60
actcaatttt· tgttcgctcc tttttggcct tttccaattt gtccatctca attttctggg   120
ccttggctaa tgcctcatag taggagtcct cagaccagcc atggggatca aacatatcct   180
ttgggtagtt ggtgccaagc tcgtcaatgg cacagaatgg atcagcttct cgtaaatcta   240
gggttccgaa attctttctt cctttggata atgtagttca tatccattcc ctcctttatc   300
t   301

<210> 238
<211> 301
<212> DNA
<213> Homo sapien

<400> 238
gggcaggttt tttttttttt tttttttgatg gtgcagaccc ttgctttatt tgtctgactt   60
gttcacagtt cagccccctg ctcagaaaac caacgggcca gctaaggaga ggaggaggca   120
ccttgagact tccggagtcg aggctctcca gggttcccca gcccatcaat cattttctgc   180
acccccctgcc tgggaagcag ctccctgggg ggtgggaatg ggtgactaga agggatttca   240
gtgtgggacc cagggtctgt tcttcacagt aggaggtgga agggatgact aatttctttta   300
t   301

<210> 239
<211> 239
<212> DNA
<213> Homo sapien

82

```
        <400> 239
ataagcagct agggaattct ttatttagta atgtcctaac ataaaagttc acataactgc        60
ttctgtcaaa ccatgatact gagctttgtg acaacccaga aataactaag agaaggcaaa       120
cataatacct tagagatcaa gaaacattta cacagttcaa ctgtttaaaa atagctcaac       180
attcagccag tgagtagagt gtgaatgcca gcatacacag tatacaggtc cttcaggga        239


        <210> 240
        <211> 300
        <212> DNA
        <213> Homo sapien


        <400> 240
ggtcctaatg aagcagcagc ttccacattt taacgcaggt ttacggtgat actgtccttt        60
gggatctgcc ctccagtgga accttttaag gaagaagtgg gcccaagcta agttccacat       120
gctgggtgag ccagatgact tctgttccct ggtcactttc ttcaatgggg cgaatggggg       180
ctgccaggtt tttaaaatca tgcttcatct tgaagcacac ggtcacttca ccctcctcac       240
gctgtgggtg tactttgatg aaaatacccca ctttgttggc ctttctgaag ctataatgtc       300


        <210> 241
        <211> 301
        <212> DNA
        <213> Homo sapien


        <400> 241
gaggtctggt gctgaggtct ctgggctagg aagaggagtt ctgtggagct ggaagccaga        60
cctctttgga ggaaactcca gcagctatgt tggtgtctct gagggaatgc aacaaggctg       120
ctcctccatg tattggaaaa ctgcaaactg gactcaactg gaaggaagtg ctgctgccag       180
tgtgaagaac cagcctgagg tgacagaaac ggaagcaaac aggaacagcc agtcttttct       240
tcctcctcct gtcatacggt ctctctcaag catcctttgt tgtcaggggc ctaaaaggga       300
g                                                                      301


        <210> 242
        <211> 301
        <212> DNA
        <213> Homo sapien


        <400> 242
ccgaggtcct gggatgcaac caatcactct gtttcacgtg acttttatca ccatacaatt        60
tgtggcattt cctcattttc tacattgtag aatcaagagt gtaaataaat gtatatcgat       120
gtcttcaaga atatatcatt cctttttcac tagaacccat tcaaaatata agtcaagaat       180
cttaatatca acaaatatat caagcaaact ggaaggcaga ataactacca taatttagta       240
taagtaccca aagtttata aatcaaaagc cctaatgata accatttta gaattcaatc       300
a                                                                      301


        <210> 243
        <211> 301
        <212> DNA
        <213> Homo sapien


        <400> 243
aggtaagtcc cagtttgaag ctcaaaagat ctggtatgag cataggctca tcgacgacat        60
ggtggcccaa gctatgaaat cagagggagg cttcatctgg gcctgtaaaa actatgatgg       120
tgacgtgcag tcggactctg tggcccaagg gtatggctct ctcggcatga tgaccagcgt       180
gctggtttgt ccagatggca agacagtaga agcagaggct gcccacggga ctgtaacccg       240
tcactaccgc atgttccaga aaggacagga gacgtccacc aatcccattg cttccatttt       300
t                                                                      301


        <210> 244
```

```
        <211> 300
        <212> DNA
        <213> Homo sapien

        <400> 244
gctggtttgc aagaatgaaa tgaatgattc tacagctagg acttaacctt gaaatggaaa        60
gtcatgcaat cccatttgca ggatctgtct gtgcacatgc ctctgtagag agcagcattc       120
ccagggacct tggaaacagt tgacactgta aggtgcttgc tccccaagac acatcctaaa       180
aggtgttgta atggtgaaaa cgtcttcctt ctttattgcc ccttcttatt tatgtgaaca       240
actgtttgtc ttttgtgtat cttttttaaa ctgtaaagtt caattgtgaa aatgaatatc       300

        <210> 245
        <211> 301
        <212> DNA
        <213> Homo sapien

        <400> 245
gtctgagtat ttaaaatgtt attgaaatta tccccaacca atgttagaaa agaaagaggt        60
tatatactta gataaaaaat gaggtgaatt actatccatt gaaatcatgc tcttagaatt       120
aaggccagga gatattgtca ttaatgtara cttcaggaca ctagagtata gcagccctat       180
gttttcaaag agcagagatg caattaaata ttgtttagca tcaaaaaggc cactcaatac       240
agctaataaa atgaaagacc taatttctaa agcaattctt tataatttac aaagtttttaa      300
g                                                                        301

        <210> 246
        <211> 301
        <212> DNA
        <213> Homo sapien

        <400> 246
ggtctgtcct acaatgcctg cttcttgaaa gaagtcggca ctttctagaa tagctaaata        60
acctgggctt attttaaaga actatttgta gctcagattg gttttcctat ggctaaaata       120
agtgcttctt gtgaaaatta aataaaacag ttaattcaaa gccttgatat atgttaccac       180
taacaatcat actaaatata ttttgaagta caaagtttga catgctctaa agtgacaacc       240
caaatgtgtc ttacaaaaca cgttcctaac aaggtatgct ttacactacc aatgcagaaa       300
c                                                                        301

        <210> 247
        <211> 301
        <212> DNA
        <213> Homo sapien

        <400> 247
aggtcctttg gcagggctca tggatcagag ctcaaactgg agggaaaggc atttcgggta        60
gcctaagagg gcgactggcg gcagcacaac caaggaaggc aaggttgttt cccccacgct       120
gtgtcctgtg ttcaggtgcg acacacaatc ctcatgggaa caggatcacc catgcgctgc       180
ccttgatgat caaggttggg gcttaagtgg attaagggag gcaagttctg ggttccttgc       240
cttttcaaac catgaagtca ggctctgtat ccctcctttt cctaactgat attctaacta       300
a                                                                        301

        <210> 248
        <211> 301
        <212> DNA
        <213> Homo sapien

        <400> 248
aggtccttgg agatgccatt tcagccgaag gactcttctw ttcggaagta caccctcact        60
attaggaaga ttcttagggg taattttttct gaggaaggag aactagccaa cttaagaatt      120
```

```
acaggaagaa agtggtttgg aagacagcca aagaaataaa agcagattaa attgtatcag    180
gtacattcca gcctgttggc aactccataa aaacatttca gattttaatc ccgaatttag    240
ctaatgagac tggattttttg ttttttatgt tgtgtgtcgc agagctaaaa actcagttcc   300
c                                                                    301

        <210> 249
        <211> 301
        <212> DNA
        <213> Homo sapien

        <400> 249
gtccagagga agcacctggt gctgaactag gcttgccctg ctgtgaactt gcacttggag    60
ccctgacgct gctgttctcc ccgaaaaacc cgaccgacct ccgcgatctc cgtcccgccc    120
ccagggagac acagcagtga ctcagagctg gtcgcacact gtgcctccct cctcaccgcc    180
catcgtaatg aattattttg aaaattaatt ccaccatcct ttcagattct ggatggaaag    240
actgaatctt tgactcagaa ttgtttgctg aaaagaatga tgtgactttc ttagtcattt    300
a                                                                    301

        <210> 250
        <211> 301
        <212> DNA
        <213> Homo sapien

        <400> 250
ggtctgtgac aaggacttgc aggctgtggg aggcaagtga cccttaacac tacacttctc    60
cttatcttta ttggcttgat aaacataatt atttctaaca ctagcttatt tccagttgcc    120
cataagcaca tcagtacttt tctctggctg gaatagtaaa ctaaagtatg gtacatctac    180
ctaaaagact actatgtgga ataatacata ctaatgaagt attacatgat ttaaagacta    240
caataaaacc aaacatgctt ataacattaa gaaaaacaat aaagatacat gattgaaacc    300
a                                                                    301

        <210> 251
        <211> 301
        <212> DNA
        <213> Homo sapien

        <400> 251
gccgaggtcc tacatttggc ccagtttccc cctgcatcct ctccagggcc cctgcctcat    60
agacaacctc atagagcata ggagaactgg ttgccctggg ggcaggggga ctgtctggat    120
ggcaggggtc ctcaaaaatg ccactgtcac tgccaggaaa tgcttctgag cagtacacct    180
cattgggatc aatgaaaagc ttcaagaaat cttcaggctc actctcttga aggcccggaa    240
cctctggagg ggggcagtgg aatcccagct ccaggacgga tcctgtcgaa aagatatcct    300
c                                                                    301

        <210> 252
        <211> 301
        <212> DNA
        <213> Homo sapien

        <400> 252
gcaaccaatc actctgtttc acgtgacttt tatcaccata caatttgtgg catttcctca    60
ttttctacat tgtagaatca agagtgtaaa taaatgtata tcgatgtctt caagaatata    120
tcattccttt ttcactagga acccattcaa aatataagtc aagaatctta atatcaacaa    180
atatatcaag caaactggaa ggcagaataa ctaccataat ttagtataag tacccaaagt    240
tttataaatc aaaagcccta atgataacca tttttagaat tcaatcatca ctgtagaatc    300
a                                                                    301

        <210> 253
```

```
        <211> 301
        <212> DNA
        <213> Homo sapien


        <400> 253
ttccctaaga agatgttatt ttgttgggtt ttgttccccc tccatctcga ttctcgtacc          60
caactaaaaa aaaaaaataa agaaaaaatg tgctgcgttc tgaaaaataa ctccttagct         120
tggtctgatt gttttcagac cttaaaatat aaacttgttt cacaagcttt aatccatgtg         180
gatttttttt cttagagaac cacaaaacat aaaaggagca agtcggactg aatacctgtt         240
tccatagtgc ccacagggta ttcctcacat tttctccata ggaaaatgct ttttcccaag         300
g                                                                         301


        <210> 254
        <211> 301
        <212> DNA
        <213> Homo sapien


        <400> 254
cgctgcgcct ttcccttggg ggaggggcaa ggccagaggg ggtccaagtg cagcacgagg          60
aacttgacca attcccttga agcgggtggg ttaaaccctg taaatgggaa caaaatcccc         120
ccaaatctct tcatcttacc ctggtggact cctgactgta gaattttttg gttgaaacaa         180
gaaaaaaata aagctttgga cttttcaagg ttgcttaaca ggtactgaaa gactggcctc         240
acttaaactg agccaggaaa agctgcagat ttattaatgg gtgtgttagt gtgcagtgcc         300
t                                                                         301


        <210> 255
        <211> 302
        <212> DNA
        <213> Homo sapien


        <400> 255
agctttttttt ttttttttttt tttttttttt ttcattaaaa aatagtgctc tttattataa          60
attactgaaa tgtttctttt ctgaatataa atataaatat gtgcaaagtt tgacttggat         120
tgggattttg ttgagttctt caagcatctc ctaataccct caagggcctg agtaggggg          180
aggaaaaagg actggaggtg gaatctttat aaaaaacaag agtgattgag gcagattgta         240
aacattatta aaaaacaaga aacaaacaaa aaaatagaga aaaaaaccac cccaacacac         300
aa                                                                        302


        <210> 256
        <211> 301
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(301)
        <223> n = A,T,C or G


        <400> 256
gttccagaaa acattgaagg tggcttccca aagtctaact agggataccc cctctagcct          60
aggaccctcc tccccacacc tcaatccacc aaaccatcca taatgcaccc agataggccc         120
accccaaaaa gcctggacac cttgagcaca cagttatgac caggacagac tcatctctat         180
aggcaaatag ctgctggcaa actggcatta cctggtttgt ggggatgggg gggcaagtgt         240
gtggcctctc ggcctggtta gcaagaacat tcagggtagg cctaagttan tcgtgttagt         300
t                                                                         301


        <210> 257
        <211> 301
```

```
          <212> DNA
          <213> Homo sapien

          <400> 257
gttgtggagg aactctggct tgctcattaa gtcctactga ttttcactat cccctgaatt          60
tccccactta tttttgtctt tcactatcgc aggccttaga agaggtctac ctgcctccag         120
tcttacctag tccagtctac cccctggagt tagaatggcc atcctgaagt gaaaagtaat         180
gtcacattac tcccttcagt gatttcttgt agaagtgcca atccctgaat gccaccaaga         240
tcttaatctt cacatcttta atcttatctc tttgactcct ctttacaccg gagaaggctc         300
c                                                                         301


          <210> 258
          <211> 301
          <212> DNA
          <213> Homo sapien


          <220>
          <221> misc_feature
          <222> (1)...(301)
          <223> n = A,T,C or G


          <400> 258
cagcagtagt agatgccgta tgccagcacg cccagcactc ccaggatcag caccagcacc          60
aggggcccag ccaccaggcg cagaagcaag ataaacagta ggctcaagac cagagccacc         120
cccagggcaa caagaatcca ataccaggac tgggcaaaat cttcaaagat cttaacactg         180
atgtctcggg cattgaggct gtcaataana cgctgatccc ctgctgtatg gtggtgtcat         240
tggtgatccc tgggagcgcc ggtggagtaa cgttggtcca tggaaagcag cgcccacaac         300
t                                                                         301


          <210> 259
          <211> 301
          <212> DNA
          <213> Homo sapien


          <220>
          <221> misc_feature
          <222> (1)...(301)
          <223> n = A,T,C or G


          <400> 259
tcatatatgc aaacaaatgc agactangcc tcaggcagag actaaaggac atctcttggg          60
gtgtcctgaa gtgatttgga cccctgaggg cagacaccta agtaggaatc ccagtgggaa         120
gcaaagccat aaggaagccc aggattcctt gtgatcagga agtgggccag gaaggtctgt         180
tccagctcac atctcatctg catgcagcac ggaccggatg cgcccactgg gtcttggctt         240
ccctcccatc ttctcaagca gtgtccttgt tgagccattt gcatccttgg ctccaggtgg         300
c                                                                         301


          <210> 260
          <211> 301
          <212> DNA
          <213> Homo sapien


          <400> 260
tttttttttct ccctaaggaa aaagaaggaa caagtctcat aaaaccaaat aagcaatggt          60
aaggtgtctt aacttgaaaa agattaggag tcactggttt acaagttata attgaatgaa         120
agaactgtaa cagccacagt tggccatttc atgccaatgg cagcaaacaa caggattaac         180
taggcaaaa  taaataagtg tgtggaagcc ctgataagtg cttaataaac agactgattc         240
actgagacat cagtacctgc ccgggcggcc gctcgagccg aattctgcag atatccatca         300
```

c   301

```
        <210> 261
        <211> 301
        <212> DNA
        <213> Homo sapien

        <400> 261
aaatattcga gcaaatcctg taactaatgt gtctccataa aaggctttga actcagtgaa        60
tctgcttcca tccacgattc tagcaatgac ctctcggaca tcaaagctcc tcttaaggtt       120
agcaccaact attccataca attcatcagc aggaaataaa ggctcttcag aaggttcaat       180
ggtgacatcc aatttcttct gataatttag attcctcaca accttcctag ttaagtgaag       240
ggcatgatga tcatccaaag cccagtggtc acttactcca gactttctgc aatgaagatc       300
a                                                                        301

        <210> 262
        <211> 301
        <212> DNA
        <213> Homo sapien

        <400> 262
gaggagagcc tgttacagca tttgtaagca cagaatactc caggagtatt tgtaattgtc        60
tgtgagcttc ttgccgcaag tctctcagaa atttaaaaag atgcaaatcc ctgagtcacc       120
cctagacttc ctaaaccaga tcctctgggg ctggaacctg gcactctgca tttgtaatga       180
gggctttctg gtgcacacct aattttgtgc atctttgccc taaatcctgg attagtgccc       240
catcattacc cccacattat aatgggatag attcagagca gatactctcc agcaaagaat       300
c                                                                        301

        <210> 263
        <211> 301
        <212> DNA
        <213> Homo sapien·

        <220>
        <221> misc_feature
        <222> (1)...(301)
        <223> n = A,T,C or G

        <400> 263
tttagcttgt ggtaaatgac tcacaaaact gattttaaaa tcaagttaat gtgaattttg        60
aaaattacta cttaatccta attcacaata acaatggcat taaggtttga cttgagttgg       120
ttcttagtat tatttatggt aaataggctc ttaccacttg caaataactg gccacatcat       180
taatgactga cttcccagta aggctctcta aggggtaagt angaggatcc acaggatttg       240
agatgctaag gccccagaga tcgtttgatc caaccctctt attttcagag gggaaaatgg       300
g                                                                        301

        <210> 264
        <211> 301
        <212> DNA
        <213> Homo sapien

        <400> 264
aaagacgtta aaccactcta ctaccacttg tggaactctc aaagggtaaa tgacaaascc        60
aatgaatgac tctaaaaaca atatttacat ttaatggttt gtagacaata aaaaaacaag       120
gtggatagat ctagaattgt aacattttaa gaaaaccata scatttgaca gatgagaaag       180
ctcaattata gatgcaaagt tataactaaa ctactatagt agtaaagaaa tacatttcac       240
acccttcata taaattcact atcttggctt gaggcactcc ataaaatgta tcacgtgcat       300
a                                                                        301
```

```
        <210> 265
        <211> 301
        <212> DNA
        <213> Homo sapien

        <400> 265
tgcccaagtt atgtgtaagt gtatccgcac ccagaggtaa aactacactg tcatctttgt      60
cttcttgtga cgcagtattt cttctctggg gagaagccgg gaagtcttct cctggctcta     120
catattcttg gaagtctcta atcaactttt gttccatttg tttcatttct tcaggaggga     180
ttttcagttt gtcaacatgt tctctaacaa cacttgccca tttctgtaaa gaatccaaag     240
cagtccaagg ctttgacatg tcaacaacca gcataactag agtatccttc agagatacgg     300
c                                                                     301

        <210> 266
        <211> 301
        <212> DNA
        <213> Homo sapien

        <400> 266
taccgtctgc ccttcctccc atccaggcca tctgcgaatc tacatgggtc ctcctattcg      60
acaccagatc actctttcct ctacccacag gcttgctatg agcaagagac acaacctcct     120
ctcttctgtg ttccagcttc ttttcctgtt cttcccaccc cttaagttct attcctgggg     180
atagagacac caatacccat aacctctctc ctaagcctcc ttataaccca gggtgcacag     240
cacagactcc tgacaactgg taaggccaat gaactgggag ctcacagctg gctgtgcctg     300
a                                                                     301

        <210> 267
        <211> 301
        <212> DNA
        <213> Homo sapien

        <400> 267
aaagagcaca ggccagctca gcctgccctg gccatctaga ctcagcctgg ctccatgggg      60
gttctcagtg ctgagtccat ccaggaaaag ctcacctaga ccttctgagg ctgaatcttc     120
atcctcacag gcagcttctg agagcctgat attcctagcc ttgatggtct ggagtaaagc     180
ctcattctga ttcctctcct tcttttcttt caagttggct ttcctcacat ccctctgttc     240
aattcgcttc agcttgtctg ctttagccct catttccaga agcttcttct ctttggcatc     300
t                                                                     301

        <210> 268
        <211> 301
        <212> DNA
        <213> Homo sapien

        <400> 268
aatgtctcac tcaactactt cccagcctac cgtggcctaa ttctgggagt tttcttctta      60
gatcttggga gagctggttc ttctaaggag aaggaggaag gacagatgta actttggatc     120
tcgaagagga agtctaatgg aagtaattag tcaacggtcc ttgtttagac tcttggaata     180
tgctgggtgg ctcagtgagc ccttttggag aaagcaagta ttattcttaa ggagtaacca     240
cttcccattg ttctactttc taccatcatc aattgtatat tatgtattct ttggagaact     300
a                                                                     301

        <210> 269
        <211> 301
        <212> DNA
        <213> Homo sapien
```

```
        <400> 269
taacaatata cactagctat cttttttaact gtccatcatt agcaccaatg aagattcaat      60
aaaattacct ttattcacac atctcaaaac aattctgcaa attcttagtg aagtttaact     120
atagtcacag accttaaaata ttcacattgt tttctatgtc tactgaaaat aagttcacta    180
ctttctgga tattctttac aaaatcttat taaaattcct ggtattatca cccccaatta     240
tacagtagca caaccacctt atgtagtttt tacatgatag ctctgtagaa gtttcacatc     300
t                                                                      301

        <210> 270
        <211> 301
        <212> DNA
        <213> Homo sapien

        <400> 270
cattgaagag cttttgcgaa acatcagaac acaagtgctt ataaaattaa ttaagcctta      60
cacaagaata catattcctt ttatttctaa ggagttaaac atagatgtag ctgatgtgga     120
gagcttgctg gtgcagtgca tattggataa cactattcat ggccgaattg atcaagtcaa     180
ccaactcctt gaactggatc atcagaagaa gggtggtgca cgatatactg cactagataa     240
tggaccaacc aactaaattc tctcaccagg ctgtatcagt aaactggctt aacagaaaac     300
a                                                                      301

        <210> 271
        <211> 301
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(301)
        <223> n = A,T,C or G

        <400> 271
aaaaggttct cataagatta acaatttaaa taaatatttg atagaacatt ctttctcatt      60
tttatagctc atctttaggg ttgatattca gttcatgctt cccttgctgt tcttgatcca     120
gaattgcaat cacttcatca gcctgtattc gctccaattc tctataaagt gggtccaagg     180
tgaaccacag agccacagca cacctctttc ccttggtgac tgccttcacc ccatganggt     240
tctctcctcc agatganaac tgatcatgcg cccacatttt gggttttata gaagcagtca     300
c                                                                      301

        <210> 272
        <211> 301
        <212> DNA
        <213> Homo sapien

        <400> 272
taaattgcta agccacagat aacaccaatc aaatggaaca aatcactgtc ttcaaatgtc      60
ttatcagaaa accaaatgag cctggaatct tcataatacc taaacatgcc gtatttagga     120
tccaataatt ccctcatgat gagcaagaaa aattctttgc gcacccctcc tgcatccaca     180
gcatcttctc caacaaatat aaccttgagt ggcttcttgt aatctatgtt ctttgttttc     240
ctaaggactt ccattgcatc tcctacaata ttttctctac gcaccactag aattaagcag     300
g                                                                      301

        <210> 273
        <211> 301
        <212> DNA
        <213> Homo sapien

        <220>
```

```
        <221> misc_feature
        <222> (1)...(301)
        <223> n = A,T,C or G

        <400> 273
acatgtgtgt atgtgtatct ttgggaaaan aanaagacat cttgtttayt attttttttgg    60
agagangctg ggacatggat aatcacwtaa tttgctayta tyactttaat ctgactygaa   120
gaaccgtcta aaaataaaat ttaccatgtc dtatattcct tatagtatgc ttatttcacc   180
ttytttctgt ccagagagag tatcagtgac ananatttma gggtgaamac atgmattggt   240
gggacttnty tttacngagm accctgcccg sgcgccctcg makcngantt ccgcsananc   300
t                                                                   301


        <210> 274
        <211> 301
        <212> DNA
        <213> Homo sapien


        <220>
        <221> misc_feature
        <222> (1)...(301)
        <223> n = A,T,C or G

        <400> 274
cttatatact ctttctcaga ggcaaaagag gagatgggta atgtagacaa ttctttgagg    60
aacagtaaat gattattaga gagaangaat ggaccaagga gacagaaatt aacttgtaaa   120
tgattctctt tggaatctga atgagatcaa gaggccagct ttagcttgtg gaaaagtcca   180
tctaggtatg gttgcattct cgtcttcttt tctgcagtag ataatgaggt aaccgaaggc   240
aattgtgctt cttttgataa gaagctttct tggtcatatc aggaaattcc aganaaagtc   300
c                                                                   301


        <210> 275
        <211> 301
        <212> DNA
        <213> Homo sapien


        <220>
        <221> misc_feature
        <222> (1)...(301)
        <223> n = A,T,C or G

        <400> 275
tcggtgtcag cagcacgtgg cattgaacat tgcaatgtgg agcccaaacc acagaaaatg    60
gggtgaaatt ggccaacttt ctattaactt atgttggcaa ttttgccacc aacagtaagc   120
tggcccttct aataaaagaa aattgaaagg tttctcacta aacggaatta agtagtggag   180
tcaagagact cccaggcctc agcgtacctg cccgggcggc cgctcgaagc cgaattctgc   240
agatatccat cacactggcg gncgctcgan catgcatcta gaaggnccaa ttcgccctat   300
a                                                                   301


        <210> 276
        <211> 301
        <212> DNA
        <213> Homo sapien


        <400> 276
tgtacacata ctcaataaat aaatgactgc attgtggtat tattactata ctgattatat    60
ttatcatgtg acttctaatt agaaaatgta tccaaaagca aaacagcaga tatacaaaat   120
taaagagaca gaagatagac attaacagat aaggcaactt atacattgag aatccaaatc   180
caatacattt aaacatttgg gaaatgaggg ggacaaatgg aagccagatc aaatttgtgt   240
```

```
aaaactattc agtatgtttc ccttgcttca tgtctgagaa ggctctcctt caatggggat        300
g                                                                        301
```

        <210> 277
        <211> 301
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(301)
        <223> n = A,T,C or G

        <400> 277
```
tttgttgatg tcagtatttt attacttgcg ttatgagtgc tcacctggga aattctaaag         60
atacagagga cttggaggaa gcagagcaac tgaatttaat ttaaaagaag gaaaacattg        120
gaatcatggc actcctgata ctttcccaaa tcaacactct caatgcccca ccctcgtcct        180
caccatagtg gggagactaa agtggccacg gatttgcctt angtgtgcag tgcgttctga        240
gttcnctgtc gattacatct gaccagtctc cttttttccga agtccntccg ttcaatcttg        300
c                                                                        301
```

        <210> 278
        <211> 301
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(301)
        <223> n = A,T,C or G

        <400> 278
```
taccactaca ctccagcctg ggcaacagag caagacctgt ctcaaagcat aaaatggaat         60
aacatatcaa atgaaacagg gaaatgaag ctgacaattt atggaagcca gggcttgtca        120
cagtctctac tgttattatg cattacctgg gaatttatat aagcccttaa taataatgcc        180
aatgaacatc tcatgtgtgc tcacaatgtt ctggcactat tataagtgct tcacaggttt        240
tatgtgttct tcgtaacttt atggantagg tactcggccg cgaacacgct aagccgaatt        300
c                                                                        301
```

        <210> 279
        <211> 301
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(301)
        <223> n = A,T,C or G

        <400> 279
```
aaagcaggaa tgacaaagct tgcttttctg gtatgttcta ggtgtattgt gactttttact         60
gttatattaa ttgccaatat aagtaaatat agattatata tgtatagtgt ttcacaaagc        120
ttagaccttt accttccagc caccccacag tgcttgatat ttcagagtca gtcattggtt        180
atacatgtgt agttccaaag cacataagct agaanaanaa atatttctag ggagcactac        240
catctgtttt cacatgaaat gccacacaca tagaactcca acatcaattt cattgcacag        300
a                                                                        301
```

        <210> 280

```
        <211> 301
        <212> DNA
        <213> Homo sapien

        <400> 280
ggtactggag ttttcctccc ctgtgaaaac gtaactactg ttgggagtga attgaggatg        ·60
tagaaaggtg gtggaaccaa attgtggtca atggaaatag gagaatatgg ttctcactct        120
tgagaaaaaa acctaagatt agcccaggta gttgcctgta acttcagttt ttctgcctgg        180
gtttgatata gtttagggtt ggggttagat taagatctaa attacatcag gacaaagaga        240
cagactatta actccacagt taattaagga ggtatgttcc atgtttattt gttaaagcag        300
t                                                                        301

        <210> 281
        <211> 301
        <212> DNA
        <213> Homo sapien

        <400> 281
aggtacaaga aggggaatgg gaaagagctg ctgctgtggc attgttcaac ttggatattc        60
gccgagcaat ccaaatcctg aatgaagggg catcttctga aaaaggagat ctgaatctca        120
atgtggtagc aatggctttta tcgggttata cggatgagaa gaactcccatt tggagagaaa        180
tgtgtagcac actgcgatta cagctaaata acccgtattt gtgtgtcatg tttgcatttc        240
tgacaagtga aacaggatct tacgatggag ttttgtatga aaacaaagtt gcagtacctc        300
g                                                                        301

        <210> 282
        <211> 301
        <212> DNA
        <213> Homo sapien

        <400> 282
caggtactac agaattaaaa tactgacaag caagtagttt cttggcgtgc acgaattgca        60
tccagaaccc aaaaattaag aaattcaaaa agacattttg tgggcacctg ctagcacaga        120
agcgcagaag caaagcccag gcagaaccat gctaaccttta cagctcagcc tgcacagaag        180
cgcagaagca aagcccaggc agaaccatgc taaccttaca gctcagcctg cacagaagcg        240
cagaagcaaa gcccaggcag aacatgctaa ccttacagct cagcctgcac agaagcacag        300
a                                                                        301

        <210> 283
        <211> 301
        <212> DNA
        <213> Homo sapien

        <400> 283
atctgtatac ggcagacaaa ctttatarag tgtagagagg tgagcgaaag gatgcaaaag        60
cactttgagg gctttataat aatatgctgc ttgaaaaaaa aaatgtgtag ttgatactca        120
gtgcatctcc agacatagta aggggttgct ctgaccaatc aggtgatcat ttttctatc        180
acttcccagg ttttatgcaa aaattttgtt aaattctata atggtgatat gcatctttta        240
ggaaacatat acatttttaa aaatctattt tatgtaagaa ctgacagacg aatttgcttt        300
g                                                                        301

        <210> 284
        <211> 301
        <212> DNA
        <213> Homo sapien

        <400> 284
caggtacaaa acgctattaa gtggcttaga atttgaacat ttgtggtctt tatttacttt        60
```

```
        gcttcgtgtg tgggcaaagc aacatcttcc ctaaatatat attaccaaga aaagcaagaa    120
        gcagattagg tttttgacaa aacaaacagg ccaaaagggg gctgacctgg agcagagcat    180
        ggtgagaggc aaggcatgag agggcaagtt tgttgtggac agatctgtgc ctactttatt    240
        actggagtaa aagaaaacaa agttcattga tgtcgaagga tatatacagt gttagaaatt    300
        a                                                                   301


            <210> 285
            <211> 301
            <212> DNA
            <213> Homo sapien

            <220>
            <221> misc_feature
            <222> (1)...(301)
            <223> n = A,T,C or G

            <400> 285
        acatcaccat gatcggatcc cccacccatt atacgttgta tgtttacata aatactcttc     60
        aatgatcatt agtgttttaa aaaaaatact gaaaactcct tctgcatccc aatctctaac    120
        caggaaagca aatgctattt acagacctgc aagccctccc tcaaacnaaa ctatttctgg    180
        attaaatatg tctgacttct tttgaggtca cacgactagg caaatgctat ttacgatctg    240
        caaaagctgt ttgaagagtc aaagcccccca tgtgaacacg atttctggac cctgtaacag    300
        t                                                                   301


            <210> 286
            <211> 301
            <212> DNA
            <213> Homo sapien

            <400> 286
        taccactgca ttccagcctg ggtgacagag tgagactccg tctccaaaaa aaactttgct     60
        tgtatattat ttttgcctta cagtggatca ttctagtagg aaaggacagt aagatttttt    120
        atcaaaatgt gtcatgccag taagagatgt tatattcttt tctcatttct tccccaccca    180
        aaaataagct accatatagc ttataagtct caaatttttg ccttttacta aaatgtgatt    240
        gtttctgttc attgtgtatg cttcatcacc tatattaggc aaattccatt ttttcccttg    300
        t                                                                   301


            <210> 287
            <211> 301
            <212> DNA
            <213> Homo sapien

            <400> 287
        tacagatctg ggaactaaat attaaaaatg agtgtggctg gatatatgga gaatgttggg     60
        cccagaagga acgtagagat cagatattac aacagctttg ttttgagggt tagaaatatg    120
        aaatgatttg gttatgaacg cacagtttag gcagcagggc cagaatcctg accctctgcc    180
        ccgtggttat ctcctcccca gcttggctgc ctcatgttat cacagtattc cattttgttt    240
        gttgcatgtc ttgtgaagcc atcaagattt tctcgtctgt tttcctctca ttggtaatgc    300
        t                                                                   301


            <210> 288
            <211> 301
            <212> DNA
            <213> Homo sapien

            <400> 288
        gtacacctaa ctgcaaggac agctgaggaa tgtaatgggc agccgctttt aaagaagtag     60
        agtcaatagg aagacaaatt ccagttccag ctcagtctgg gtatctgcaa agctgcaaaa    120
```

```
gatctttaaa gacaatttca agagaatatt tccttaaagt tggcaatttg gagatcatac    180
aaaagcatct gcttttgtga tttaatttag ctcatctggc cactggaaga atccaaacag    240
tctgccttaa ttttggatga atgcatgatg gaaattcaat aatttagaaa gttaaaaaaa    300
a                                                                     301
```

```
        <210> 289
        <211> 301
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(301)
        <223> n = A,T,C or G

        <400> 289
```

```
ggtacactgt ttccatgtta tgtttctaca cattgctacc tcagtgctcc tggaaactta     60
gcttttgatg tctccaagta gtccaccttc atttaactct ttgaaactgt atcatctttg    120
ccaagtaaga gtggtggcct atttcagctg ctttgacaaa atgactggct cctgacttaa    180
cgttctataa atgaatgtgc tgaagcaaag tgcccatggt ggcggcgaan aagagaaaga    240
tgtgttttgt tttggactct ctgtggtccc ttccaatgct gtgggtttcc aaccagngga    300
a                                                                     301
```

```
        <210> 290
        <211> 301
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(301)
        <223> n = A,T,C or G

        <400> 290
```

```
acactgagct cttcttgata aatatacaga atgcttggca tatacaagat tctatactac     60
tgactgatct gttcatttct ctcacagctc ttacccccaa aagcttttcc accctaagtg    120
ttctgacctc cttttctaat cacagtaggg atagaggcag anccacctac aatgaacatg    180
gagttctatc aagaggcaga aacagcacag aatcccagtt ttaccattcg ctagcagtgc    240
tgccttgaac aaaaacattt ctccatgtct cattttcttc atgcctcaag taacagtgag    300
a                                                                     301
```

```
        <210> 291
        <211> 301
        <212> DNA
        <213> Homo sapien

        <400> 291
```

```
caggtaccaa tttcttctat cctagaaaca tttcatttta tgttgttgaa acataacaac     60
tatatcagct agattttttt tctatgcttt acctgctatg gaaaatttga cacattctgc    120
tttactcttt tgtttatagg tgaatcacaa aatgtatttt tatgtattct gtagttcaat    180
agccatggct gtttacttca tttaatttat ttagcataaa gacattatga aaaggcctaa    240
acatgagctt cacttcccca ctaactaatt agcatctgtt atttcttaac cgtaatgcct    300
a                                                                     301
```

```
        <210> 292
        <211> 301
        <212> DNA
        <213> Homo sapien
```

```
<220>
<221> misc_feature
<222> (1)...(301)
<223> n = A,T,C or G

<400> 292
acctttttagt agtaatgtct aataataaat aagaaatcaa ttttataagg tccatatagc      60
tgtattaaat aatttttaag tttaaaagat aaaataccat cattttaaat gttggtattc     120
aaaaccaaag natataaccg aaaggaaaaa cagatgagac ataaaatgat ttgcnagatg     180
ggaaatatag tasttyatga atgttnatta aattccagtt ataatagtgg ctacacactc     240
tcactacaca cacagacccc acagtcctat atgccacaaa cacatttcca taacttgaaa     300
a                                                                     301


<210> 293
<211> 301
<212> DNA
<213> Homo sapien

<400> 293
ggtaccaagt gctggtgcca gcctgttacc tgttctcact gaaaagtctg gctaatgctc      60
ttgtgtagtc acttctgatt ctgacaatca atcaatcaat ggcctagagc actgactgtt     120
aacacaaacg tcactagcaa agtagcaaca gctttaagtc taaatacaaa gctgttctgt     180
gtgagaattt tttaaaaggc tacttgtata ataacccttg tcatttttaa tgtacctcgg     240
ccgcgaccac gctaagccga attctgcaga tatccatcac actggcggcc gctcgagcat     300
g                                                                     301


<210> 294
<211> 301
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(301)
<223> n = A,T,C or G

<400> 294
tgacccataa caatatacac tagctatctt tttaactgtc catcattagc accaatgaag      60
attcaataaa attacctta ttcacacatc tcaaaacaat tctgcaaatt cttagtgaag     120
tttaactata gtcacaganc ttaaatattc acattgtttt ctatgtctac tgaaaataag     180
ttcactactt ttctgggata ttctttacaa aatcttatta aaattcctgg tattatcacc     240
cccaattata cagtagcaca accaccttat gtagtttta catgatagct ctgtagaggt     300
t                                                                     301


<210> 295
<211> 305
<212> DNA
<213> Homo sapien

<400> 295
gtactctttc tctcccctcc tctgaattta attctttcaa cttgcaattt gcaaggatta      60
cacatttcac tgtgatgtat attgtgttgc aaaaaaaaaa gtgtctttgt ttaaaattac     120
ttggtttgtg aatccatctt gctttttccc cattggaact agtcattaac ccatctctga     180
actggtagaa aaacrtctga agagctagtc tatcagcatc tgacaggtga attggatggt     240
tctcagaacc atttcacccca gacagcctgt ttctatcctg tttaataaat tagtttgggt     300
tctct                                                                 305
```

```
<210> 296
<211> 301
<212> DNA
<213> Homo sapien

<400> 296
aggtactatg ggaagctgct aaaataatat ttgatagtaa aagtatgtaa tgtgctatct      60
cacctagtag taaactaaaa ataaactgaa actttatgga atctgaagtt attttccttg     120
attaaataga attaataaac caatatgagg aaacatgaaa ccatgcaatc tactatcaac     180
tttgaaaaag tgattgaacg aaccacttag ctttcagatg atgaacactg ataagtcatt     240
tgtcattact ataaatttta aaatctgtta ataagatggc ctataggag gaaaaagggg      300
c                                                                      301

<210> 297
<211> 300
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(300)
<223> n = A,T,C or G

<400> 297
actgagtttt aactggacgc caagcaggca aggctggaag gttttgctct ctttgtgcta      60
aaggttttga aaaccttgaa ggagaatcat tttgacaaga agtacttaag agtctagaga     120
acaaagangt gaaccagctg aaagctctcg ggggaanctt acatgtgttg ttaggcctgt     180
tccatcattg ggagtgcact ggccatccct caaaatttgt ctgggctggc ctgagtggtc     240
accgcacctc ggccgcgacc acgctaagcc gaattctgca gatatccatc acactggcgg     300

<210> 298
<211> 301
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(301)
<223> n = A,T,C or G

<400> 298
tatggggttt gtcacccaaa agctgatgct gagaaaggcc tccctggggc ccctcccgcg      60
ggcatctgag agacctggtg ttccagtgtt tctggaaatg ggtcccagtg ccgccggctg     120
tgaagctctc agatcaatca cgggaagggc ctggcggtgg tggccacctg gaaccaccct     180
gtcctgtctg tttacatttc actaycaggt tttctctggg cattacnatt tgttcccta      240
caacagtgac ctgtgcattc tgctgtggcc tgctgtgtct gcaggtggct ctcagcgagg     300
t                                                                      301

<210> 299
<211> 301
<212> DNA
<213> Homo sapien

<400> 299
gttttgagac ggagtttcac tcttgttgcc cagactggac tgcaatggca gggtctctgc      60
tcactgcacc ctctgcctcc caggttcgag caattctcct gcctcagcct cccaggtagc     120
tgggattgca ggctcacgcc accatacca gctaattttt ttgtattttt agtagagacg      180
gagtttcgcc atgttggcca gctggtctca aactcctgac ctcaagcgac ctgcctgcct     240
```

```
cggcctccca aagtgctgga attataggca tgagtcaaca cgcccagcct aaagatattt      300
t                                                                     301
```

        <210> 300
        <211> 301
        <212> DNA
        <213> Homo sapien

        <400> 300
```
attcagtttt atttgctgcc ccagtatctg taaccaggag tgccacaaaa tcttgccaga      60
tatgtcccac acccactggg aaaggctccc acctggctac ttcctctatc agctgggtca     120
gctgcattcc acaaggttct cagcctaatg agtttcacta cctgccagtc tcaaaactta     180
gtaaagcaag accatgacat tcccccacgg aaatcagagt ttgccccacc gtcttgttac     240
tataaagcct gcctctaaca gtccttgctt cttcacacca atcccgagcg catcccccat     300
g                                                                     301
```

        <210> 301
        <211> 301
        <212> DNA
        <213> Homo sapien

        <400> 301
```
ttaaattttt gagaggataa aaaggacaaa taatctagaa atgtgtcttc ttcagtctgc      60
agaggacccc aggtctccaa gcaaccacat ggtcaagggc atgaataatt aaaagttggt     120
gggaactcac aaagaccctc agagctgaga cacccacaac agtgggagct cacaaagacc     180
ctcagagctg agacacccac aacagtggga gctcacaaag accctcagag ctgagacacc     240
cacaacagca cctcgttcag ctgccacatg tgtgaataag gatgcaatgt ccagaagtgt     300
t                                                                     301
```

        <210> 302
        <211> 301
        <212> DNA
        <213> Homo sapien

        <400> 302
```
aggtacacat ttagcttgtg gtaaatgact cacaaaactg attttaaaat caagttaatg      60
tgaattttga aaattactac ttaatcctaa ttcacaataa caatggcatt aaggtttgac     120
ttgagttggt tcttagtatt atttatggta aataggctct taccacttgc aaataactgg     180
ccacatcatt aatgactgac ttcccagtaa ggctctctaa ggggtaagta ggaggatcca     240
caggatttga gatgctaagg ccccagagat cgtttgatcc aaccctctta ttttcagagg     300
g                                                                     301
```

        <210> 303
        <211> 301
        <212> DNA
        <213> Homo sapien

        <400> 303
```
aggtaccaac tgtggaaata ggtagaggat cattttttct ttccatatca actaagttgt      60
atattgtttt ttgacagttt aacacatctt cttctgtcag agattctttc acaatagcac     120
tggctaatgg aactaccgct tgcatgttaa aaatggtggt ttgtgaaatg atcataggcc     180
agtaacgggt atgttttct aactgatctt ttgctcgttc caaagggacc tcaagacttc     240
catcgatttt atatctgggg tctagaaaag gagttaatct gttttccctc ataaattcac     300
c                                                                     301
```

        <210> 304
        <211> 301
        <212> DNA

<210> Homo sapien

<400> 304

```
acatggatgt tattttgcag actgtcaacc tgaatttgta tttgcttgac attgcctaat      60
tattagtttc agtttcagct tacccacttt ttgtctgcaa catgcaraas agacagtgcc     120
ctttttagtg tatcatatca ggaatcatct cacattggtt tgtgccatta ctggtgcagt     180
gactttcagc cacttgggta aggtggagtt ggccatatgt ctccactgca aaattactga     240
ttttcctttt gtaattaata agtgtgtgtg tgaagattct ttgagatgag gtatatatct     300
c                                                                     301
```

<210> 305
<211> 301
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(301)
<223> n = A,T,C or G

<400> 305

```
gangtacagc gtggtcaagg taacaagaag aaaaaaatgt gagtggcatc ctgggatgag      60
caggggggaca gacctggaca gacacgttgt catttgctgc tgtgggtagg aaaatgggcg     120
taaaggagga gaaacagata caaaatctcc aactcagtat taaggtattc tcatgcctag     180
aatattggta gaaacaagaa tacattcata tggcaaataa ctaaccatgg tggaacaaaa     240
ttctgggatt taagttggat accaangaaa ttgtattaaa agagctgttc atggaataag     300
a                                                                     301
```

<210> 306
<211> 8
<212> PRT
<213> Homo sapien

<400> 306

```
Val Leu Gly Trp Val Ala Glu Leu
1               5
```

<210> 307
<211> 637
<212> DNA
<213> Homo sapien

<400> 307

```
acagggratg aagggaaagg gagaggatga ggaagccccc ctggggattt ggtttggtcc      60
ttgtgatcag gtggtctatg gggcttatcc ctacaaagaa gaatccagaa ataggggcac     120
attgaggaat gatacttgag cccaaagagc attcaatcat tgtttttattt gccttmtttt     180
cacaccattg gtgagggagg gattaccacc ctggggttat gaagatggtt gaacacccca     240
cacatagcac cggagatatg agatcaacag tttcttagcc atagagattc acagcccaga     300
gcaggaggac gcttgcacac catgcaggat gacatggggg atgcgctcgg gattggtgtg     360
aagaagcaag gactgttaga ggcaggcttt atagtaacaa gacggtgggg caaactctga     420
tttccgtggg ggaatgtcat ggtcttgctt tactaagttt tgagactggc aggtagtgaa     480
actcattagg ctgagaacct tgtggaatgc acttgaccca sctgatagag gaagtagcca     540
ggtgggagcc tttcccagtg ggtgtgggac atatctggca agattttgtg gcactcctgg     600
ttacagatac tggggcagca aataaaactg aatcttg                             637
```

<210> 308
<211> 647
<212> DNA

<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(647)
<223> n = A,T,C or G

<400> 308

```
acgattttca ttatcatgta aatcgggtca ctcaaggggc caaccacagc tgggagccac      60
tgctcagggg aaggttcata tgggactttc tactgcccaa ggttctatac aggatataaa     120
ggngcctcac agtatagatc tggtagcaaa gaagaagaaa caaacactga tctctttctg     180
ccacccctct gacccttggg aactcctctg accctttaga acaagcctac ctaatatctg     240
ctagagaaaa gaccaacaac ggcctcaaag gatctcttac catgaaggtc tcagctaatt     300
cttggctaag atgtgggttc cacattaggt tctgaatatg ggggaaggg tcaatttgct      360
cattttgtgt gtggataaag tcaggatgcc cagggccag agcaggggc tgcttgcttt       420
gggaacaatg gctgagcata taaccatagg ttatggggaa caaaacaaca tcaaagtcac     480
tgtatcaatt gccatgaaga cttgagggac ctgaatctac cgattcatct taaggcagca     540
ggaccagttt gagtggcaac aatgcagcag cagaatcaat ggaaacaaca gaatgattgc     600
aatgtccttt tttttctcct gcttctgact tgataaaagg ggaccgt                   647
```

<210> 309
<211> 460
<212> DNA
<213> Homo sapien

<400> 309

```
actttatagt ttaggctgga cattggaaaa aaaaaaaagc cagaacaaca tgtgatagat      60
aatatgattg gctgcacact tccagactga tgaatgatga acgtgatgga ctattgtatg     120
gagcacatct tcagcaagag ggggaaatac tcatcatttt tggccagcag ttgtttgatc     180
accaaacatc atgccagaat actcagcaaa ccttcttagc tcttgagaag tcaaagtccg     240
ggggaattta ttcctggcaa ttttaattgg actccttatg tgagagcagc ggctacccag     300
ctggggtggt ggagcgaacc cgtcactagt ggacatgcag tggcagagct cctggtaacc     360
acctagagga atacacaggc acatgtgtga tgccaagcgt gacacctgta gcactcaaat     420
ttgtcttgtt tttgtctttc ggtgtgtaag attcttaagt                           460
```

<210> 310
<211> 539
<212> DNA
<213> Homo sapien

<400> 310

```
acgggactta tcaaataaag ataggaaaag aagaaaactc aaatattata ggcagaaatg      60
ctaaaggttt taaaatatgt caggattgga agaaggcatg gataaagaac aaagttcagt     120
taggaaagag aaacacagaa ggaagagaca caataaaagt cattatgtat tctgtgagaa     180
gtcagacagt aagatttgtg ggaaatgggt tggtttgttg tatggtatgt attttagcaa     240
taatctttat ggcagagaaa gctaaaatcc tttagcttgc gtgaatgatc acttgctgaa     300
ttcctcaagg taggcatgat gaaggagggt ttagaggaga cacagacaca atgaactgac     360
ctagatagaa agccttagta tactcagcta ggaatagtga ttctgagggc acactgtgac.    420
atgattatgt cattacatgt atggtagtga tggggatgat aggaaggaag aacttatggc     480
atattttcac ccccacaaaa gtcagttaaa tattgggaca ctaaccatcc aggtcaaga     539
```

<210> 311
<211> 526
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature

100

```
        <222> (1)...(526)
        <223> n = A,T,C or G

        <400> 311
caaatttgag ccaatgacat agaattttac aaatcaagaa gcttattctg gggccatttc       60
ttttgacgtt ttctctaaac tactaaagag gcattaatga tccataaatt atattatcta      120
catttacagc atttaaaatg tgttcagcat gaaatattag ctacagggga agctaaataa      180
attaaacatg gaataaagat ttgtccttaa atataatcta caagaagact ttgatatttg      240
tttttcacaa gtgaagcatt cttataaagt gtcataacct ttttggggaa actatgggaa      300
aaaatgggga aactctgaag ggtttttaagt atcttacctg aagctacaga ctccataacc     360
tctctttaca gggagctcct gcagccccta cagaaatgag tggctgagat tcttgattgc      420
acagcaagag cttctcatct aaaccctttc cctttttagt atctgtgtat caagtataaa      480
agttctataa actgtagtnt acttatttta atccccaaag cacagt                     526


        <210> 312
        <211> 500
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(500)
        <223> n = A,T,C or G

        <400> 312
cctctctctc cccaccccct gactctagag aactgggttt tctcccagta ctccagcaat       60
tcatttctga aagcagttga gccactttat tccaaagtac actgcagatg ttcaaactct      120
ccatttctct ttcccttcca cctgccagtt ttgctgactc tcaacttgtc atgagtgtaa      180
gcattaagga cattatgctt cttcgattct gaagacaggc cctgctcatg gatgactctg      240
gcttcttagg aaaatatttt tcttccaaaa tcagtaggaa atctaaactt atccctctt       300
tgcagatgtc tagcagcttc agacatttgg ttaagaaccc atgggaaaaa aaaaaatcct      360
tgctaatgtg gtttcctttg taaaccanga ttcttatttg nctggtatag aatatcagct      420
ctgaacgtgt ggtaaagatt tttgtgtttg aatataggag aaatcagttt gctgaaaagt      480
tagtcttaat tatctattgg                                                  500


        <210> 313
        <211> 718
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(718)
        <223> n = A,T,C or G

        <400> 313
ggagatttgt gtggtttgca gccgagggag accaggaaga tctgcatggt gggaaggacc       60
tgatgataca gaggtgagaa ataagaaagg ctgctgactt taccatctga ggccacacat      120
ctgctgaaat ggagataatt aacatcacta gaaacagcaa gatgacaata taatgtctaa      180
gtagtgacat gttttttgcac atttccagcc ctttttaaata tccacacaca caggaagcac    240
aaaaggaagc acagagatcc ctgggagaaa tgcccggccg ccatcttggg tcatcgatga      300
gcctcgccct gtgcctgntc ccgcttgtga gggaaggaca ttagaaaatg aattgatgtg      360
ttccttaaag gatggcagga aaacagatcc tgttgtggat atttatttga acggattac       420
agatttgaaa tgaagtcaca aagtgagcat taccaatgag aggaaaacag acgagaaat       480
cttgatggtt cacaagacat gcaacaaaca aaatggaata ctgtgatgac acgagcagcc      540
aactggggag gagataccac ggggcagagg tcaggattct ggccctgctg cctaactgtg      600
cgttatacca atcatttcta tttctaccct caaacaagct gtngaatatc tgacttacgg      660
ttcttntggc ccacattttc atnatccacc ccntcntttt aannttantc caaantgt        718
```

```
        <210> 314
        <211> 358
        <212> DNA
        <213> Homo sapien

        <400> 314
gtttatttac attacagaaa aaacatcaag acaatgtata ctatttcaaa tatatccata          60
cataatcaaa tatagctgta gtacatgttt tcattggtgt agattaccac aaatgcaagg         120
caacatgtgt agatctcttg tcttattctt ttgtctataa tactgtattg tgtagtccaa         180
gctctcggta gtccagccac tgtgaaacat gctcccttta gattaacctc gtggacgctc         240
ttgttgtatt gctgaactgt agtgccctgt attttgcttc tgtctgtgaa ttctgttgct         300
tctgggcat ttccttgtga tgcagaggac caccacacag atgacagcaa tctgaatt           358

        <210> 315
        <211> 341
        <212> DNA
        <213> Homo sapien

        <400> 315
taccacctcc ccgctggcac tgatgagccg catcaccatg gtcaccagca ccatgaaggc          60
ataggtgatg atgaggacat ggaatgggcc cccaaggatg gtctgtccaa agaagcgagt         120
gacccccatt ctgaagatgt ctggaacctc taccagcagg atgatgatag ccccaatgac         180
agtcaccagc tccccgacca gccggatatc gtccttaggg gtcatgtagg cttcctgaag         240
tagcttctgc tgtaagaggg tgttgtcccg ggggctcgtg cggttattgg tcctgggctt         300
gagggggcgg tagatgcagc acatggtgaa gcagatgatg t                            341

        <210> 316
        <211> 151
        <212> DNA
        <213> Homo sapien

        <400> 316
agactgggca agactcttac gccccacact gcaatttggt cttgttgccg tatccattta          60
tgtgggcctt tctcgagttt ctgattataa acaccactgg agcgatgtgt tgactggact         120
cattcaggga gctctggttg caatattagt t                                        151

        <210> 317
        <211> 151
        <212> DNA
        <213> Homo sapien

        <400> 317
agaactagtg gatcctaatg aaatacctga aacatatatt ggcatttatc aatggctcaa          60
atcttcattt atctctggcc ttaaccctgg ctcctgaggc tgcggccagc agatcccagg         120
ccagggctct gttcttgcca cacctgcttg a                                        151

        <210> 318
        <211> 151
        <212> DNA
        <213> Homo sapien

        <400> 318
actggtggga ggcgctgttt agttggctgt tttcagaggg gtctttcgga gggacctcct          60
gctgcaggct ggagtgtctt tattcctggc gggagaccgc acattccact gctgaggctg         120
tgggggcggt ttatcaggca gtgataaaca t                                        151

        <210> 319
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```
        <211> 151
        <212> DNA
        <213> Homo sapien

        <400> 319
aactagtgga tccagagcta taggtacagt gtgatctcag ctttgcaaac acattttcta        60
catagatagt actaggtatt aatagatatg taaagaaaga aatcacacca ttaataatgg       120
taagattggg tttatgtgat tttagtgggt a                                       151

        <210> 320
        <211> 150
        <212> DNA
        <213> Homo sapien

        <400> 320
aactagtgga tccactagtc cagtgtggtg gaattccatt gtgttggggt tctagatcgc        60
gagcggctgc cctttttttt tttttttttg ggggggaatt tttttttttt aatagttatt       120
gagtgttcta cagcttacag taaataccat                                         150

        <210> 321
        <211> 151
        <212> DNA
        <213> Homo sapien

        <400> 321
agcaactttg ttttcatcc aggttatttt aggcttagga tttcctctca cactgcagtt        60
tagggtggca ttgtaaccag ctatggcata ggtgttaacc aaaggctgag taaacatggg       120
tgcctctgag aaatcaaagt cttcatacac t                                       151

        <210> 322
        <211> 151
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(151)
        <223> n = A,T,C or G

        <400> 322
atccagcatc ttctcctgtt tcttgccttc ctttttcttc ttcttasatt ctgcttgagg        60
tttgggcttg gtcagtttgc cacagggctt ggagatggtg acagtcttct ggcattcggc       120
attgtgcagg gctcgcttca nacttccagt t                                       151

        <210> 323
        <211> 151
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(151)
        <223> n = A,T,C or G

        <400> 323
tgaggacttg tkttcttttt ctttattttt aatcctctta ckttgtaaat atattgccta        60
nagactcant tactacccag tttgtggttt twtgggagaa atgtaactgg acagttagct       120
gttcaatyaa aaagacactt ancccatgtg g                                       151
```

```
        <210> 324
        <211> 461
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(461)
        <223> n = A,T,C or G

        <400> 324
acctgtgtgg aatttcagct ttcctcatgc aaaaggattt tgtatccccg gcctacttga        60
agaagtggtc agctaaagga atccaggttg ttggttggac tgttaatacc tttgatgaaa       120
agagttacta cgaatcccat cttggttcca gctatatcac tgacagcatg gtagaagact       180
gcgaacctca cttctagact ttcacggtgg gacgaaacgg gttcagaaac tgccaggggc       240
ctcatacagg gatatcaaaa tacccttttgt gctacccagg ccctggggaa tcaggtgact       300
cacacaaatg caatagttgg tcactgcatt tttacctgaa ccaaagctaa acccggtgtt       360
gccaccatgc accatggcat gccagagttc aacactgttg ctcttgaaaa ttgggtctga       420
aaaaacgcac aagagcccct gccctgccct agctgangca c                          461

        <210> 325
        <211> 400
        <212> DNA
        <213> Homo sapien

        <400> 325
acactgtttc catgttatgt ttctacacat tgctacctca gtgctcctgg aaacttagct        60
tttgatgtct ccaagtagtc caccttcatt taactctttg aaactgtatc atctttgcca       120
agtaagagtg gtggcctatt tcagctgctt tgacaaaatg actggctcct gacttaacgt       180
tctataaatg aatgtgctga agcaaagtgc ccatggtggc ggcgaagaag agaaagatgt       240
gttttgtttt ggactctctg tggtcccttc caatgctgtg ggtttccaac caggggaagg       300
gtcccttttg cattgccaag tgccataacc atgagcacta cgctaccatg gttctgcctc       360
ctggccaagc aggctggttt gcaagaatga aatgaatgat                             400

        <210> 326
        <211> 1215
        <212> DNA
        <213> Homo sapien

        <400> 326
ggaggactgc agcccgcact cgcagccctg gcaggcggca ctggtcatgg aaaacgaatt        60
gttctgctcg ggcgtcctgg tgcatccgca gtgggtgctg tcagccgcac actgtttcca       120
gaactcctac accatcgggc tgggcctgca cagtcttgag gccgaccaag agccagggag       180
ccagatggtg gaggccagcc tctccgtacg gcacccagag tacaacagac ccttgctcgc       240
taacgacctc atgctcatca agttggacga atccgtgtcc gagtctgaca ccatccggag       300
catcagcatt gcttcgcagt gccctaccgc ggggaactct tgcctcgttt ctggctgggg       360
tctgctggcg aacggcagaa tgcctaccgt gctgcagtgc gtgaacgtgt cggtggtgtc       420
tgaggaggtc tgcagtaagc tctatgaccc gctgtaccac cccagcatgt tctgcgccgg       480
cggagggcaa gaccagaagg actcctgcaa cggtgactct ggggggcccc tgatctgcaa       540
cgggtacttg cagggccttg tgtctttcgg aaaagccccg tgtggccaag ttggcgtgcc       600
aggtgtctac accaacctct gcaaattcac tgagtggata gagaaaaccg tccaggccag       660
ttaactctgg ggactgggaa cccatgaaat tgacccccaa atacatcctg cggaaggaat       720
tcaggaatat ctgttcccag cccctcctcc ctcaggccca ggagtccagg ccccagccc       780
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agaccccccca gccctcctc cctcagaccc aggagtccag cccctcctcc ctcagaccca       900
ggagtccaga cccccagcc cctcctccct cagacccagg ggtccaggcc cccaacccct       960
cctccctcag actcagaggt ccaagccccc aacccctcct tccccagacc cagaggtcca      1020
```

```
ggtcccagcc cctcctccct cagacccagc ggtccaatgc cacctagact ctccctgtac   1080
acagtgcccc cttgtggcac gttgacccaa ccttaccagt tggttttttca ttttttgtcc   1140
ctttcccta gatccagaaa taaagtctaa gagaagcgca aaaaaaaaaa aaaaaaaaaa   1200
aaaaaaaaaa aaaaa                                                     1215
```

```
          <210> 327
          <211> 220
          <212> PRT
          <213> Homo sapien


          <400> 327
Glu Asp Cys Ser Pro His Ser Gln Pro Trp Gln Ala Ala Leu Val Met
1               5                  10                 15
Glu Asn Glu Leu Phe Cys Ser Gly Val Leu Val His Pro Gln Trp Val
            20                  25                 30
Leu Ser Ala Ala His Cys Phe Gln Asn Ser Tyr Thr Ile Gly Leu Gly
        35                  40                  45
Leu His Ser Leu Glu Ala Asp Gln Glu Pro Gly Ser Gln Met Val Glu
    50                  55                  60
Ala Ser Leu Ser Val Arg His Pro Glu Tyr Asn Arg Pro Leu Leu Ala
65                  70                  75                  80
Asn Asp Leu Met Leu Ile Lys Leu Asp Glu Ser Val Ser Glu Ser Asp
            85                  90                  95
Thr Ile Arg Ser Ile Ser Ile Ala Ser Gln Cys Pro Thr Ala Gly Asn
            100                 105                 110
Ser Cys Leu Val Ser Gly Trp Gly Leu Leu Ala Asn Gly Arg Met Pro
        115                 120                 125
Thr Val Leu Gln Cys Val Asn Val Ser Val Val Ser Glu Glu Val Cys
    130                 135                 140
Ser Lys Leu Tyr Asp Pro Leu Tyr His Pro Ser Met Phe Cys Ala Gly
145                 150                 155                 160
Gly Gly Gln Asp Gln Lys Asp Ser Cys Asn Gly Asp Ser Gly Gly Pro
            165                 170                 175
Leu Ile Cys Asn Gly Tyr Leu Gln Gly Leu Val Ser Phe Gly Lys Ala
            180                 185                 190
Pro Cys Gly Gln Val Gly Val Pro Gly Val Tyr Thr Asn Leu Cys Lys
    195                 200                 205
Phe Thr Glu Trp Ile Glu Lys Thr Val Gln Ala Ser
    210                 215                 220
```

```
          <210> 328
          <211> 234
          <212> DNA
          <213> Homo sapien


          <400> 328
cgctcgtctc tggtagctgc agccaaatca taaacggcga ggactgcagc ccgcactcgc   60
agccctggca ggcggcactg gtcatggaaa acgaattgtt ctgctcgggc gtcctggtgc   120
atccgcagtg ggtgctgtca gccacacact gtttccagaa ctcctacacc atcgggctgg   180
gcctgcacag tcttgaggcc gaccaagagc cagggagcca gatggtggag gcca           234
```

```
          <210> 329
          <211> 77
          <212> PRT
          <213> Homo sapien


          <400> 329
Leu Val Ser Gly Ser Cys Ser Gln Ile Ile Asn Gly Glu Asp Cys Ser
```

```
        1               5               10              15
        Pro His Ser Gln Pro Trp Gln Ala Ala Leu Val Met Glu Asn Glu Leu
                    20                  25                  30
        Phe Cys Ser Gly Val Leu Val His Pro Gln Trp Val Leu Ser Ala Thr
                    35                  40                  45
        His Cys Phe Gln Asn Ser Tyr Thr Ile Gly Leu Gly Leu His Ser Leu
                    50                  55                  60
        Glu Ala Asp Gln Glu Pro Gly Ser Gln Met Val Glu Ala
        65                  70                  75
```

```
        <210> 330
        <211> 70
        <212> DNA
        <213> Homo sapien

        <400> 330
cccaacacaa tggcccgatc ccatccctga ctccgccctc aggatcgctc gtctctggta      60
gctgcagcca                                                             70

        <210> 331
        <211> 22
        <212> PRT
        <213> Homo sapien

        <400> 331
        Gln His Asn Gly Pro Ile Pro Ser Leu Thr Pro Pro Ser Gly Ser Leu
        1               5               10                  15
        Val Ser Gly Ser Cys Ser
                    20

        <210> 332
        <211> 2507
        <212> DNA
        <213> Homo sapien

        <400> 332
tggtgccgct gcagccggca gagatggttg agctcatgtt cccgctgttg ctcctccttc      60
tgcccttcct tctgtatatg gctgcgcccc aaatcaggaa aatgctgtcc agtggggtgt     120
gtacatcaac tgttcagctt cctgggaaag tagttgtggt cacaggagct aatacaggta     180
tcgggaagga gacagccaaa gagctggctc agagaggagc tcgagtatat ttagcttgcc     240
gggatgtgga aaagggggaa ttggtggcca aagagatcca gaccacgaca gggaaccagc     300
aggtgttggt gcggaaactg gacctgtctg atactaagtc tattcgagct tttgctaagg     360
gcttcttagc tgaggaaaag cacctccacg ttttgatcaa caatgcagga gtgatgatgt     420
gtccgtactc gaagacagca gatggctttg agatgcacat aggagtcaac cacttgggtc     480
acttcctcct aacccatctg ctgctagaga aactaaagga atcagcccca tcaaggatag     540
taaatgtgtc ttccctcgca catcacctgg gaaggatcca cttccataac ctgcagggcg     600
agaaattcta caatgcaggc ctggcctact gtcacagcaa gctagccaac atcctcttca     660
cccaggaact ggcccggaga ctaaaaggct ctggcgttac gacgtattct gtacaccctg     720
gcacagtcca atctgaactg gttcggcact catctttcat gagatggatg tggtggcttt     780
tctccttttt catcaagact cctcagcagg gagcccagac cagcctgcac tgtgccttaa     840
cagaaggtct tgagattcta agtgggaatc atttcagtga ctgtcatgtg gcatgggtct     900
ctgcccaagc tcgtaatgag actatagcaa ggcggctgtg ggacgtcagt tgtgacctgc     960
tgggcctccc aatagactaa caggcagtgc cagttggacc caagagaaga ctgcagcaga    1020
ctacacagta cttcttgtca aaatgattct ccttcaaggt tttcaaaacc tttagcacaa    1080
agagagcaaa accttccagc cttgcctgct ggtgtccag ttaaaactca gtgtactgcc     1140
agattcgtct aaatgtctgt catgtccaga tttactttgc ttctgttact gccagagtta    1200
ctagagatat cataatagga taagaagacc ctcatatgac ctgcacagct cattttcctt    1260
ctgaaagaaa ctactaccta ggagaatcta agctatagca gggatgattt atgcaaattt    1320
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106

```
gaactagctt ctttgttcac aattcagttc ctcccaacca accagtcttc acttcaagag    1380
ggccacactg caacctcagc ttaacatgaa taacaaagac tggctcagga gcagggcttg    1440
cccaggcatg gtggatcacc ggaggtcagt agttcaagac cagcctggcc aacatggtga    1500
aacccccacct ctactaaaaa ttgtgtatat ctttgtgtgt cttcctgttt atgtgtgcca    1560
agggagtatt ttcacaaagt tcaaaacagc cacaataatc agagatggag caaaccagtg    1620
ccatccagtc tttatgcaaa tgaaatgctg caaagggaag cagattctgt atatgttggt    1680
aactacccac caagagcaca tgggtagcag ggaagaagta aaaaaagaga aggagaatac    1740
tggaagataa tgcacaaaat gaagggacta gttaaggatt aactagccct ttaaggatta    1800
actagttaag gattaatagc aaaagayatt aaatatgcta acatagctat ggaggaattg    1860
agggcaagca cccaggactg atgaggtctt aacaaaaacc agtgtggcaa aaaaaaaaaa    1920
aaaaaaaaaa aaaatccta aaaacaaaca aacaaaaaaa acaattcttc attcagaaaa    1980
attatcttag ggactgatat tggtaattat ggtcaatta ataatatttt ggggcatttc    2040
cttacattgt cttgacaaga ttaaaatgtc tgtgccaaaa ttttgtattt tatttggaga    2100
cttcttatca aaagtaatgc tgccaaagga agtctaagga attagtagtg ttcccatcac    2160
ttgtttggag tgtgctattc taaaagattt tgatttcctg gaatgacaat tatattttaa    2220
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aaattagaaa aattctgata atagtgcaga ataaatgaat taatgtttta cttaatttat    2400
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aataaaaacg taagaattaa aagtttgatt acaaaaaaaa aaaaaa        2507
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        <210> 333
        <211> 3030
        <212> DNA
        <213> Homo sapien

        <400> 333
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ggagagcgag ctgggtgccc cctagattcc ccgcccccgc acctcatgag ccgacccctcg       120
gctccatgga gcccggcaat tatgccacct tggatggagc caaggatatc gaaggcttgc       180
tgggagcggg aggggggcgg aatctggtcg cccactcccc tctgaccagc cacccagcgg       240
cgcctacgct gatgcctgct gtcaactatg cccccttgga tctgccaggc tcggcggagc       300
cgccaaagca atgccaccca tgccctgggg tgccccaggg gacgtcccca gctcccgtgc       360
cttatggtta cttttggaggc gggtactact cctgccgagt gtcccggagc tcgctgaaac       420
cctgtgccca ggcagccacc ctggccgcgt accccgcgga gactcccacg gccggggaag       480
agtaccccag ycgccccact gagtttgcct tctatccggg atatccggga acctaccagc       540
ctatggccag ttacctggac gtgtctgtgg tgcagactct gggtgctcct ggagaaccgc       600
gacatgactc cctgttgcct gtggacagtt accagtcttg ggctctcgct ggtggctgga       660
acagccagat gtgttgccag ggagaacaga acccaccagg tcccttttgg aaggcagcat       720
ttgcagactc cagcgggcag caccctcctg acgcctgcgc ctttcgtcgc ggccgcaaga       780
aacgcattcc gtacagcaag gggcagttgc gggagctgga gcgggagtat gcggctaaca       840
agttcatcac caaggacaag aggcgcaaga tctcggcagc caccagcctc tcggagcgcc       900
agattaccat ctggtttcag aaccgccggg tcaaagagaa gaaggttctc gccaaggtga       960
agaacagcgc tacccctaa gagatctcct tgcctgggtg ggaggagcga aagtggggt        1020
gtcctgggga gaccaggaac ctgccaagcc caggctgggg ccaaggactc tgctgagagg       1080
cccctagaga caacaccctt cccaggccac tggctgctgg actgttcctc aggagcggcc       1140
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cccaaagaac ctgcgcccagt cataatcatt catcctgaca gtggcaataa tcacgataac       1260
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ccaccccata gggtgtaccc actggtcttg gaagcacccca tccttaatac gatgattttt       1620
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ggatcccagt gaagtagatg tttgtagcct tgcatactta gcccttccca ggcacaaacg       1860
```

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gtagagacct ttgggggtct ggaacctctg gactccccat gctctaactc ccacactctg   2940
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aacaaaaaaa aaaaaaaaa aaaactcgag                                     3030


        <210> 334
        <211> 2417
        <212> DNA
        <213> Homo sapien


        <400> 334
ggcggccgct ctagagctag tgggatcccc cgggctgcac gaattcggca cgagtgagtt   60
ggagttttac ctgtattgtt ttaatttcaa caagcctgag gactagccac aaatgtaccc  120
agtttacaaa tgaggaaaca ggtgcaaaaa ggttgttacc tgtcaaaggt cgtatgtggc  180
agagccaaga tttgagccca gttatgtctg atgaacttag cctatgctct ttaaacttct  240
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ttacttatca atacaataat accaccttta ccaatctatt gttttgatac gagactcaaa  360
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cagaatgcat cctcctacta atgaggtcag tacacatttg cattttaaaa tgccctgtcc  660
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gcttcagccc aggagttcaa gaccagcctg ggcaacatag aaagacccca tctctcaatc  780
aatcaatcaa tgccctgtct ttgaaaataa aactctttaa gaaaggttta atgggcaggg  840
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gggacagagg gaaagagaag gagagggaac tctctggtgt ctcgtctttc aaggaccctа 1740
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tggccaagat aaagcaacag aaaaatgtcc aaagctgtgc agcaaagaca agccaccgaa 1860
```

```
cagggatctg ctcatcagtg tggggacctc caagtcggcc accctggagg caagccccca    1920
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cctcaccgac ctggtgatgc tggacactgc gatgaatggt aatgtggatg agaatatgat    2040
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ggtactgaga caatattgtc ataaattcaa tgcgcccttg tatccctttt tcttttttat    2340
ctgtctacat ctataatcac tatgcatact agtctttgtt agtgtttcta ttcmacttaa    2400
tagagatatg ttatact                                                   2417
```

        <210> 335
        <211> 2984
        <212> DNA
        <213> Homo sapien

        <400> 335

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atccctcctt ccccactctc ctttccagaa ggcacttggg gtcttatctg ttggactctg      60
aaaacacttc aggcgccctt ccaaggcttc cccaaacccc taagcagccg cagaagcgct     120
cccgagctgc cttctcccac actcaggtga tcgagttgga gaggaagttc agccatcaga     180
agtacctgtc ggccctgaa cgggcccacc tggccaagaa cctcaagctc acggagaccc      240
aagtgaagat atggttccag aacagacgct ataagactaa gcgaaagcag ctctcctcgg     300
agctgggaga cttggagaag cactcctctt tgccggccct gaaagaggag gccttctccc     360
gggcctccct ggtctccgtg tataacagct atccttacta cccatacctg tactgcgtgg     420
gcagctggag cccagctttt tggtaatgcc agctcaggtg acaaccatta tgatcaaaaa     480
ctgccttccc cagggtgtct ctatgaaaag cacaaggggc caaggtcagg gagcaagagg     540
tgtgcacacc aaagctattg gagatttgcg tggaaatctc asattcttca ctggtgagac     600
aatgaaacaa cagagacagt gaaagtttta atacctaagt cattcccca gtgcatactg      660
taggtcattt tttttgcttc tggctacctg tttgaagggg agagagggaa aatcaagtgg     720
tattttccag cactttgtat gattttggat gagctgtaca cccaaggatt ctgttctgca     780
actccatcct cctgtgtcac tgaatatcaa ctctgaaaga gcaaacctaa caggagaaag     840
gacaaccagg atgaggatgt caccaactga attaaactta agtccagaag cctcctgttg     900
gccttggaat atggccaagg ctctctctgt ccctgtaaaa gagaggggca aatagagagt     960
ctccaagaga acgccctcat gctcagcaca tatttgcatg ggaggggggag atgggtggga   1020
ggagatgaaa atatcagctt ttcttattcc tttttattcc ttttaaaatg gtatgccaac   1080
ttaagtattt acagggtggc ccaaatagaa caagatgcac tcgctgtgat tttaagacaa   1140
gctgtataaa cagaactcca ctgcaagagg ggggccgggg ccaggagaat ctccgcttgt   1200
ccaagacagg ggcctaagga gggtctccac actgctgcta ggggctgttg cattttttta   1260
ttagtagaaa gtggaaaggc ctcttctcaa cttttttccc ttgggctgga gaatttagaa   1320
tcagaagttt cctggagttt tcaggctatc atatatactg tatcctgaaa ggcaacataa   1380
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gcttcatttt agtccagatt tttagtctgg ctgcacctaa cttatgcctc gcttatttag   1500
cccgagatct ggtctttttt ttttttttt ttttccgtc tccccaaagc tttatctgtc    1560
ttgactttttt aaaaaagttt gggggcagat tctgaattgg ctaaaagaca tgcattttta   1620
aaactagcaa ctcttatttc tttcctttaa aaatacatag cattaaatcc caaatcctat   1680
ttaaagacct gacagcttga gaaggtcact actgcattta taggaccttc tggtggttct   1740
gctgttacgt ttgaagtctg acaatccttg agaatctttg catgcagagg aggtaagagg   1800
tattggattt tcacagagga agaacacagc gcagaatgaa gggccaggct tactgagctg   1860
tccagtggag ggctcatggg tgggacatgg aaaagaaggc agcctaggcc ctggggagcc   1920
cagtccactg agcaagcaag ggactgagtg agccttttgc aggaaaaggc taagaaaaag   1980
gaaaaccatt ctaaaacaca acaagaaact gtccaaatgc tttgggaact gtgtttattg   2040
cctataatgg gtccccaaaa tgggtaacct agacttcaga gagaatgagc agagagcaaa   2100
ggagaaatct ggctgtcctt ccattttcat tctgttatct caggtgagct ggtagagggg   2160
agacattaga aaaaaatgaa acaacaaaac aattactaat gaggtacgct gaggcctggg   2220
agtctcttga ctccactact taattccgtt tagtgagaaa cctttcaatt ttctttatt    2280
agaagggcca gcttactgtt ggtggcaaaa ttgccaacat aagttaatag aaagttggcc   2340
aatttcaccc cattttctgt ggtttgggct ccacattgca atgttcaatg ccacgtgctg   2400
ctgacaccga ccggagtact agccagcaca aaaggcaggg tagcctgaat tgctttctgc   2460
```

```
tctttacatt tcttttaaaa taagcatttta gtgctcagtc cctactgagt actctttctc   2520
tcccctcctc tgaatttaat tcttctcaact tgcaatttgc aaggattaca catttcactg   2580
tgatgtatat tgtgttgcaa aaaaaaaaaa aagtgtcttt gtttaaaatt acttggtttg   2640
tgaatccatc ttgctttttc cccattggaa ctagtcatta acccatctct gaactggtag   2700
aaaaacatct gaagagctag tctatcagca tctgacaggt gaattggatg gttctcagaa   2760
ccatttcacc cagacagcct gtttctatcc tgtttaataa attagtttgg gttctctaca   2820
tgcataacaa accctgctcc aatctgtcac ataaaagtct gtgacttgaa gtttagtcag   2880
caccccccacc aaactttatt tttctatgtg ttttttgcaa catatgagtg ttttgaaaat   2940
aaagtaccca tgtctttatt agaaaaaaaa aaaaaaaaaa aaaa              2984
```

```
        <210> 336
        <211> 147
        <212> PRT
        <213> Homo sapien

        <400> 336
Pro Ser Phe Pro Thr Leu Leu Ser Arg Arg His Leu Gly Ser Tyr Leu
1               5                   10                  15
Leu Asp Ser Glu Asn Thr Ser Gly Ala Leu Pro Arg Leu Pro Gln Thr
            20                  25                  30
Pro Lys Gln Pro Gln Lys Arg Ser Arg Ala Ala Phe Ser His Thr Gln
        35                  40                  45 .
Val Ile Glu Leu Glu Arg Lys Phe Ser His Gln Lys Tyr Leu Ser Ala
    50  .         .         55                  60
Pro Glu Arg Ala His Leu Ala Lys Asn Leu Lys Leu Thr Glu Thr Gln
65                  70                  75                  80
Val Lys Ile Trp Phe Gln Asn Arg Arg Tyr Lys Thr Lys Arg Lys Gln
                85                  90                  95
Leu Ser Ser Glu Leu Gly Asp Leu Glu Lys His Ser Ser Leu Pro Ala
            100                 105                 110
Leu Lys Glu Glu Ala Phe Ser Arg Ala Ser Leu Val Ser Val Tyr Asn
        115                 120                 125
Ser Tyr Pro Tyr Tyr Pro Tyr Leu Tyr Cys Val Gly Ser Trp Ser Pro
        130                 135                 140
Ala Phe Trp
`145
```

```
        <210> 337
        <211> 9
        <212> PRT
        <213> Homo sapien

        <400> 337
Ala Leu Thr Gly Phe Thr Phe Ser Ala
1               5
```

```
        <210> 338
        <211> 9
        <212> PRT
        <213> Homo sapien

        <400> 338
Leu Leu Ala Asn Asp Leu Met Leu Ile
1               5
```

```
        <210> 339
        <211> 318
```

```
        <212> PRT
        <213> Homo sapien

        <400> 339
Met Val Glu Leu Met Phe Pro Leu Leu Leu Leu Leu Leu Pro Phe Leu
  1               5                  10                  15
Leu Tyr Met Ala Ala Pro Gln Ile Arg Lys Met Leu Ser Ser Gly Val
            20                  25                  30
Cys Thr Ser Thr Val Gln Leu Pro Gly Lys Val Val Val Val Thr Gly
            35                  40                  45
Ala Asn Thr Gly Ile Gly Lys Glu Thr Ala Lys Glu Leu Ala Gln Arg
        50                  55                  60
Gly Ala Arg Val Tyr Leu Ala Cys Arg Asp Val Glu Lys Gly Glu Leu
65                  70                  75                  80
Val Ala Lys Glu Ile Gln Thr Thr Thr Gly Asn Gln Gln Val Leu Val
                85                  90                  95
Arg Lys Leu Asp Leu Ser Asp Thr Lys Ser Ile Arg Ala Phe Ala Lys
            100                 105                 110
Gly Phe Leu Ala Glu Glu Lys His Leu His Val Leu Ile Asn Asn Ala
            115                 120                 125
Gly Val Met Met Cys Pro Tyr Ser Lys Thr Ala Asp Gly Phe Glu Met
        130                 135                 140
His Ile Gly Val Asn His Leu Gly His Phe Leu Leu Thr His Leu Leu
145                 150                 155                 160
Leu Glu Lys Leu Lys Glu Ser Ala Pro Ser Arg Ile Val Asn Val Ser
                165                 170                 175
Ser Leu Ala His His Leu Gly Arg Ile His Phe His Asn Leu Gln Gly
            180                 185                 190
Glu Lys Phe Tyr Asn Ala Gly Leu Ala Tyr Cys His Ser Lys Leu Ala
            195                 200                 205
Asn Ile Leu Phe Thr Gln Glu Leu Ala Arg Arg Leu Lys Gly Ser Gly
        210                 215                 220
Val Thr Thr Tyr Ser Val His Pro Gly Thr Val Gln Ser Glu Leu Val
225                 230                 235                 240
Arg His Ser Ser Phe Met Arg Trp Met Trp Trp Leu Phe Ser Phe Phe
                245                 250                 255
Ile Lys Thr Pro Gln Gln Gly Ala Gln Thr Ser Leu His Cys Ala Leu
            260                 265                 270
Thr Glu Gly Leu Glu Ile Leu Ser Gly Asn His Phe Ser Asp Cys His
            275                 280                 285
Val Ala Trp Val Ser Ala Gln Ala Arg Asn Glu Thr Ile Ala Arg Arg
        290                 295                 300
Leu Trp Asp Val Ser Cys Asp Leu Leu Gly Leu Pro Ile Asp  .
305                 310                 315

        <210> 340
        <211> 483
        <212> DNA
        <213> Homo sapien

        <400> 340
gccgaggtct gccttcacac ggaggacacg agactgcttc ctcaagggct cctgcctgcc     60
tggacactgg tgggaggcgc tgtttagttg gctgttttca gaggggtctt tcggagggac    120
ctcctgctgc aggctggagt gtctttattc ctggcgggag accgcacatt ccactgctga    180
ggttgtgggg gcggtttatc aggcagtgat aaacataaga tgtcatttcc ttgactccgg    240
ccttcaattt tctctttggc tgacgacgga gtccgtggtg tcccgatgta actgaccccc    300
gctccaaacg tgacatcact gatgctcttc tcggggggtgc tgatggcccg cttggtcacg    360
tgctcaatct cgccattcga ctcttgctcc aaactgtatg aagacacctg actgcacgtt    420
```

```
ttttctgggc ttccagaatt taaagtgaaa ggcagcactc ctaagctccg actccgatgc    480
ctg                                                                   483
```

```
        <210> 341
        <211> 344
        <212> DNA
        <213> Homo sapien


        <400> 341
ctgctgctga gtcacagatt tcattataaa tagcctccct aaggaaaata cactgaatgc     60
tatttttact aaccattcta tttttataga aatagctgag agtttctaaa ccaactctct    120
gctgccttac aagtattaaa tattttactt ctttccataa agagtagctc aaaatatgca    180
attaatttaa taatttctga tgatggtttt atctgcagta atatgtatat catctattag    240
aatttactta atgaaaaact gaagagaaca aaatttgtaa ccactagcac ttaagtactc    300
ctgattctta acattgtctt taatgaccac aagacaacca acag                     344
```

```
        <210> 342
        <211> 592
        <212> DNA
        <213> Homo sapien


        <400> 342
acagcaaaaa agaaactgag aagcccaaty tgctttcttg ttaacatcca cttatccaac     60
caatgtggaa acttcttata cttggttcca ttatgaagtt ggacaattgc tgctatcaca    120
cctggcaggt aaaccaatgc caagagagtg atggaaacca ttggcaagac tttgttgatg    180
accaggattg gaattttata aaaatattgt tgatgggaag ttgctaaagg gtgaattact    240
tccctcagaa gagtgtaaag aaaagtcaga gatgctataa tagcagctat tttaattggc    300
aagtgccact gtggaaagag ttcctgtgtg tgctgaagtt ctgaagggca gtcaaattca    360
tcagcatggg ctgtttggtg caaatgcaaa agcacaggtc tttttagcat gctggtctct    420
cccgtgtcct tatgcaaata atcgtcttct tctaaatttc tcctaggctt cattttccaa    480
agttcttctt ggtttgtgat gtcttttctg ctttccatta attctataaa atagtatggc    540
ttcagccacc cactcttcgc cttagcttga ccgtgagtct cggctgccgc tg            592
```

```
        <210> 343
        <211> 382
        <212> DNA
        <213> Homo sapien


        <400> 343
ttcttgacct cctcctcctt caagctcaaa caccacctcc cttattcagg accggcactt     60
cttaatgttt gtggctttct ctccagcctc tcttaggagg ggtaatggtg gagttggcat    120
cttgtaactc tcctttctcc tttcttcccc tttctctgcc cgcctttccc atcctgctgt    180
agacttcttg attgtcagtc tgtgtcacat ccagtgattg ttttggtttc tgttcccttt    240
ctgactgccc aaggggctca gaaccccagc aatcccttcc tttcactacc ttctttttttg    300
ggggtagttg gaagggactg aaattgtggg gggaaggtag gaggcacatc aataaagagg    360
aaaccaccaa gctgaaaaaa aa                                             382
```

```
        <210> 344
        <211> 536
        <212> DNA
        <213> Homo sapien


        <400> 344
ctgggcctga agctgtaggg taaatcagag gcaggcttct gagtgatgag agtcctgaga     60
caataggcca cataaacttg gctggatgga acctcacaat aaggtggtca cctcttgttt    120
gtttaggggg atgccaagga taaggccagc tcagttatat gaagagaagc agaacaaaca    180
agtctttcag agaaatggat gcaatcagag tgggatcccg gtcacatcaa ggtcacactc    240
caccttcatg tgcctgaatg gttgccaggt cagaaaaatc caccccttac gagtgcggct    300
```

```
tcgaccctat atccccgcc cgcgtccctt tctccataaa attcttctta gtagctatta   360
ccttcttatt atttgatcta gaaattgccc tcctttttacc cctaccatga gccctacaaa   420
caactaacct gccactaata gttatgtcat ccctcttatt aatcatcatc ctagcctaa    480
gtctggccta tgagtgacta caaaaaggat tagactgagc cgaataacaa aaaaaa       536


        <210> 345
        <211> 251
        <212> DNA
        <213> Homo sapien


        <400> 345
accttttgag gtctctctca ccacctccac agccaccgtc accgtgggat gtgctggatg    60
tgaatgaagc ccccatcttt gtgcctcctg aaaagagagt ggaagtgtcc gaggactttg   120
gcgtgggcca ggaaatcaca tcctacactg cccaggagcc agacacattt atggaacaga   180
aaataacata tcggatttgg agagacactg ccaactggct ggagattaat ccggacactg   240
gtgccatttc c                                                       251


        <210> 346
        <211> 282
        <212> DNA
        <213> Homo sapien


        <220>
        <221> misc_feature
        <222> (1)...(282)
        <223> n = A,T,C or G


<400> 346
cgcgtctctg acactgtgat catgacaggg gttcaaacag aaagtgcctg ggccctcctt    60
ctaagtcttg ttaccaaaaa aaggaaaaag aaaagatctt ctcagttaca aattctggga   120
agggagacta tacctggctc ttgccctaag tgagaggtct tccctcccgc accaaaaaat   180
agaaaggctt tctatttcac tggcccaggt agggggaagg agagtaactt tgagtctgtg   240
ggtctcattt cccaaggtgc cttcaatgct catnaaaacc aa                      282


        <210> 347
        <211> 201
        <212> DNA
        <213> Homo sapien


        <220>
        <221> misc_feature
        <222> (1)...(201)
        <223> n = A,T,C or G


        <400> 347
acacacataa tattataaaa tgccatctaa ttggaaggag ctttctatca ttgcaagtca    60
taaatataac ttttaaaana ntactancag cttttaccta ngctcctaaa tgcttgtaaa   120
tctgagactg actggaccca cccagacccca gggcaaagat acatgttacc atatcatctt   180
tataaagaat ttttttttgt c                                            201


        <210> 348
        <211> 251
        <212> DNA
        <213> Homo sapien


        <400> 348
ctgttaatca caacatttgt gcatcacttg tgccaagtga gaaaatgttc taaaatcaca    60
agagagaaca gtgccagaat gaaactgacc ctaagtccca ggtgcccctg ggcaggcaga   120
```

```
aggagacact cccagcatgg aggagggttt atcttttcat cctaggtcag gtctacaatg    180
ggggaaggtt ttattataga actcccaaca gcccacctca ctcctgccac ccacccgatg    240
gccctgcctc c                                                        251
```

<210> 349
<211> 251
<212> DNA
<213> Homo sapien

<400> 349
```
taaaaatcaa gccatttaat tgtatctttg aaggtaaaca atatatggga gctggatcac     60
aacccctgag gatgccagag ctatgggtcc agaacatggt gtggtattat caacagagtt    120
cagaagggtc tgaactctac gtgttaccag agaacataat gcaattcatg cattccactt    180
agcaattttg taaaatacca gaaacagacc ccaagagtct ttcaagatga ggaaaattca    240
actcctggtt t                                                        251
```

<210> 350
<211> 908
<212> DNA
<213> Homo sapien

<400> 350
```
ctggacactt tgcgagggct tttgctggct gctgctgctg cccgtcatgc tactcatcgt     60
agcccgcccg gtgaagctcg ctgctttccc tacctcctta agtgactgcc aaacgcccac    120
cggctggaat tgctctggtt atgatgacag agaaaatgat ctcttcctct gtgacaccaa    180
cacctgtaaa tttgatgggg aatgtttaag aattggagac actgtgactt gcgtctgtca    240
gttcaagtgc aacaatgact atgtgcctgt gtgtggctcc aatgggggaga gctaccagaa    300
tgagtgttac ctgcgacagg ctgcatgcaa acagcagagt gagatacttg tggtgtcaga    360
aggatcatgt gccacagtcc atgaaggctc tggagaaact agtcaaaagg agacatccac    420
ctgtgatatt tgccagtttg gtgcagaatg tgacgaagat gccgaggatg tctggtgtgt    480
gtgtaatatt gactgttctc aaaccaactt caatcccctc tgcgcttctg atgggaaatc    540
ttatgataat gcatgccaaa tcaaagaagc atcgtgtcag aaacaggaga aaattgaagt    600
catgtctttg ggtcgatgtc aagataacac aactacaact actaagtctg aagatgggca    660
ttatgcaaga acagattatg cagagaatgc taacaaatta gaagaaagtg ccagagaaca    720
ccacatacct tgtccggaac attacaatgg cttctgcatg catgggaagt gtgagcattc    780
tatcaatatg caggagccat cttgcaggtg tgatgctggt tatactggac aacactgtga    840
aaaaaaggac tacagtgttc tatacgttgt tcccggtcct gtacgatttc agtatgtctt    900
aatcgcag                                                            908
```

<210> 351
<211> 472
<212> DNA
<213> Homo sapien

<400> 351
```
ccagttattt gcaagtggta agagcctatt taccataaat aatactaaga accaactcaa     60
gtcaaacctt aatgccattg ttattgtgaa ttaggattaa gtagtaattt tcaaaattca    120
cattaacttg attttaaaat cagwtttgyg agtcatttac cacaagctaa atgtgtacac    180
tatgataaaa acaaccattg tattcctgtt tttctaaaca gtcctaattt ctaacactgt    240
atatatcctt cgacatcaat gaactttgtt ttcttttact ccagtaataa agtaggcaca    300
gatctgtcca caacaaactt gccctctcat gccttgcctc tcaccatgct ctgctccagg    360
tcagcccccct tttggcctgt ttgtttttgtc aaaaacctaa tctgcttctt gcttttcttg    420
gtaatatata tttagggaag atgttgcttt gcccacacac gaagcaaagt aa            472
```

<210> 352
<211> 251
<212> DNA
<213> Homo sapien

```
        <400> 352
ctcaaagcta atctctcggg aatcaaacca gaaaagggca aggatcttag gcatggtgga    60
tgtggataag gccaggtcaa tggctgcaag catgcagaga aagaggtaca tcggagcgtg   120
caggctgcgt tccgtcctta cgatgaagac cacgatgcag tttccaaaca ttgccactac   180
atacatggaa aggaggggga agccaacccα gaaatgggct ttctctaatc ctgggatacc   240
aataagcaca a                                                        251

        <210> 353
        <211> 436
        <212> DNA
        <213> Homo sapien

        <400> 353
tttttttttt tttttttttt tttttacaa caatgcagtc atttatttat tgagtatgtg    60
cacattatgg tattattact atactgatta tatttatcat gtgacttcta attaraaaat   120
gtatccaaaa gcaaacagc agatatacaa aattaaagag acagaagata gacattaaca   180
gataaggcaa cttatacatt gacaatccaa atccaataca tttaaacatt tgggaaatga   240
gggggacaaa tggaagccar atcaaatttg tgtaaaacta ttcagtatgt ttcccttgct   300
tcatgtctga raaggctctc ccttcaatgg ggatgacaaa ctccaaatgc cacacaaatg   360
ttaacagaat actagattca cactggaacg ggggtaaaga agaaattatt ttctataaaa   420
gggctcctaa tgtagt                                                   436

        <210> 354
        <211> 854
        <212> DNA
        <213> Homo sapien

        <400> 354
cctttctag ttcaccagtt ttctgcaagg atgctggtta gggagtgtct gcaggaggag    60
caagtctgaa accaaatcta ggaaacatag gaaacgagcc aggcacaggg ctggtgggcc   120
atcagggacc accctttggg ttgatatttt gcttaatctg catctttga gtaagatcat   180
ctggcagtag aagctgttct ccaggtacat ttctctagct catgtacaaa aacatcctga   240
aggactttgt caggtgcctt gctaaaagcc agatgcgttc ggcacttcct tggtctgagg   300
ttaattgcac acctacaggc actgggctca tgctttcaag tattttgtcc tcactttagg   360
gtgagtgaaa gatccccatt ataggagcac ttgggagaga tcatataaaa gctgactctt   420
gagtacatgc agtaatgggg tagatgtgtg tggtgtgtct tcattcctgc aagggtgctt   480
gttagggagt gtttccagga ggaacaagtc tgaaaccaat catgaaataa atggtaggtg   540
tgaactggaa aactaattca aaagagagat cgtgatatca gtgtggttga tacaccttgg   600
caatatggaa ggctctaatt tgcccatatt tgaaataata attcagcttt ttgtaataca   660
aaataacaaa ggattgagaa tcatggtgtc taatgtataa aagacccagg aaacataaat   720
atatcaactg cataaatgta aaatgcatgt gacccaagaa ggccccaaag tggcagacaa   780
cattgtaccc attttccctt ccaaaatgtg agcggcgggc ctgctgcttt caaggctgtc   840
acacgggatg tcag                                                     854

        <210> 355
        <211> 676
        <212> DNA
        <213> Homo sapien

        <400> 355
gaaattaagt atgagctaaa ttccctgtta aaacctctag gggtgacaga tctcttcaac    60
caggtcaaag ctgatctttc tggaatgtca ccaaccaagg gcctatattt atcaaaagcc   120
atccacaagt catacctgga tgtcagcgaa gagggcacgg aggcagcagc agccactggg   180
gacagcatcg ctgtaaaaag cctaccaatg agagctcagt tcaaggcgaa ccacccttc   240
ctgttcttta taaggcacac tcataccaac acgatcctat tctgtggcaa gcttgcctct   300
ccctaatcag atggggttga gtaaggctca gagttgcaga tgaggtgcag agacaatcct   360
gtgactttcc cacggccaaa aagctgttca cacctcacgc acctctgtgc ctcagtttgc   420
```

```
tcatctgcaa aataggtcta ggatttcttc caaccatttc atgagttgtg aagctaaggc    480
tttgttaatc atggaaaaag gtagacttat gcagaaagcc tttctggctt tcttatctgt    540
ggtgtctcat ttgagtgctg tccagtgaca tgatcaagtc aatgagtaaa attttaaggg    600
attagatttt cttgacttgt atgtatctgt gagatcttga ataagtgacc tgacatctct    660
gcttaaagaa aaccag                                                    676
```

        <210> 356
        <211> 574
        <212> DNA
        <213> Homo sapien

        <400> 356
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tttttttttt ttttcagga aaacattctc ttactttatt tgcatctcag caaaggttct    60
catgtggcac ctgactggca tcaaaccaaa gttcgtaggc caacaaagat gggccactca    120
caagcttccc atttgtagat ctcagtgcct atgagtatct gacacctgtt cctctcttca    180
gtctcttagg gaggcttaaa tctgtctcag gtgtgctaag agtgccagcc caaggkggtc    240
aaaagtccac aaaactgcag tctttgctgg gatagtaagc caagcagtgc ctggacagca    300
gagttctttt cttgggcaac agataaccag acaggactct aatcgtgctc ttattcaaca    360
ttcttctgtc tctgcctaga ctggaataaa aagccaatct ctctcgtggc acagggaagg    420
agatacaagc tcgtttacat gtgatagatc taacaaaggc atctaccgaa gtctggtctg    480
gatagacggc acagggagct cttaggtcag cgctgctggt tggaggacat tcctgagtcc    540
agctttgcag cctttgtgca acagtacttt ccca                               574
```

        <210> 357
        <211> 393
        <212> DNA
        <213> Homo sapien

        <400> 357
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tttttttttt ttttttttt ttttttttt tacagaatat aratgcttta tcactgkact    60
taatatggkg kcttgttcac tatacttaaa aatgcaccac tcataaatat ttaattcagc    120
aagccacaac caaracttga ttttatcaac aaaaacccct aaatataaac ggsaaaaaag    180
atagatataa ttattccagt tttttttaaaa cttaaaaarat attccattgc cgaattaara    240
araaarataag tgttatatgg aaagaagggc attcaagcac actaaaaraaa cctgaggkaa    300
gcataatctg tacaaaatta aactgtcctt tttggcattt taacaaattt gcaacgktct    360
ttttttttctt tttctgtttt ttttttttt tac                                393
```

        <210> 358
        <211> 630
        <212> DNA
        <213> Homo sapien

        <400> 358
```
acagggtaaa caggaggatc cttgctctca cggagcttac attctagcag gaggacaata    60
ttaatgttta taggaaaatg atgagtttat gacaaaggaa gtagatagtg ttttacaaga    120
gcatagagta gggaagctaa tccagcacag ggaggtcaca gagacatccc taaggaagtg    180
gagtttaaac tgagagaagc aagtgcttaa actgaaggat gtgttgaaga agaagggaga    240
gtagaacaat ttgggcagag ggaaccttat agaccctaag gtgggaaggt tcaaagaact    300
gaaagagagc tagaacagct ggagccgttc tccggtgtaa agaggagtca aagagataag    360
attaaagatg tgaagattaa gatcttggtg gcattcaggg attggcactt ctacaagaaa    420
tcactgaagg gagtaatgtg acattacttt tcacttcagg atggccattc taactccagg    480
gggtagactg gactaggtaa gactggaggc aggtagacct cttctaaggc ctgcgatagt    540
gaaagacaaa aataagtggg gaaattcagg ggatagtgaa aatcagtagg acttaatgag    600
caagccagag gttcctccac aacaaccagt                                    630
```

        <210> 359
        <211> 620
        <212> DNA

```
        <213> Homo sapien

        <400> 359
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taattaaaaa atgctactaa tatagaaaat ttataatcag aaaaataaat attcagggag     120
ctcaccagaa gaataaagtg ctctgccagt tattaaagga ttactgctgg tgaattaaat     180
atggcattcc ccaagggaaa tagagagatt cttctggatt atgttcaata tttatttcac     240
aggattaact gttttaggaa cagatataaa gcttcgccac ggaagagatg gacaaagcac     300
aaagacaaca tgatacctta ggaagcaaca ctaccctttc aggcataaaa tttggagaaa     360
tgcaacatta tgcttcatga ataatatgta gaaagaaggt ctgatgaaaa tgacatcctt     420
aatgtaagat aactttataa gaattctggg tcaaataaaa ttctttgaag aaaacatcca     480
aatgtcattg acttatcaaa tactatcttg gcatataacc tatgaaggca aaactaaaca     540
aacaaaaagc tcacaccaaa caaaaccatc aacttatttt gtattctata acatacgaga     600
ctgtaaagat gtgacagtgt                                                 620

        <210> 360
        <211> 431
        <212> DNA
        <213> Homo sapien

        <400> 360
aaaaaaaaaa agccagaaca acatgtgata gataatatga ttggctgcac acttccagac      60
tgatgaatga tgaacgtgat ggactattgt atggagcaca tcttcagcaa gagggggaaa     120
tactcatcat ttttggccag cagttgtttg atcaccaaac atcatgccag aatactcagc     180
aaaccttctt agctcttgag aagtcaaagt ccggggggaat ttattcctgg caattttaat     240
tggactcctt atgtgagagc agcggctacc cagctggggt ggtggagcga acccgtcact     300
agtggacatg cagtggcaga gctcctggta accacctaga ggaatacaca ggcacatgtg     360
tgatgccaag cgtgacacct gtagcactca aatttgtctt gtttttgtct ttcggtgtgt     420
agattcttag t                                                         431

        <210> 361
        <211> 351
        <212> DNA
        <213> Homo sapien

        <400> 361
acactgattt ccgatcaaaa gaatcatcat ctttaccttg acttttcagg gaattactga      60
actttcttct cagaagatag ggcacagcca ttgccttggc ctcacttgaa gggtctgcat     120
ttgggtcctc tggtctcttg ccaagtttcc cagccactcg agggagaaat atcgggaggt     180
ttgacttcct ccggggcttt cccgagggct tcaccgtgag ccctgcggcc ctcagggctg     240
caatcctgga ttcaatgtct gaaacctcgc tctctgcctg ctggacttct gaggccgtca     300
ctgccactct gtcctccagc tctgacagct cctcatctgt ggtcctgttg t             351

        <210> 362
        <211> 463
        <212> DNA
        <213> Homo sapien

        <400> 362
acttcatcag gccataatgg gtgcctcccg tgagaatcca agcacctttg gactgcgcga      60
tgtagatgag ccggctgaag atcttgcgca tgcgcggctt caggcgaag ttcttggcgc     120
ccccggtcac agaaatgacc aggttgggtg ttttcaggtg ccagtgctgg gtcagcagct     180
cgtaaaggat ttccgcgtcc gtgtcgcagg acagacgtat atacttccct ttcttcccca     240
gtgtctcaaa ctgaatatcc ccaaaggcgt cggtaggaaa ttccttggtg tgtttcttgt     300
agttccattt ctcactttgg ttgatctggg tgccttccat gtgctggctc tgggcatagc     360
cacacttgca cacattctcc ctgataagca cgatggtgtg gacaggaagg aaggatttca     420
ttgagcctgc ttatggaaac tggtattgtt agcttaaata gac                     463
```

```
        <210> 363
        <211> 653
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(653)
        <223> n = A,T,C or G

        <400> 363
acccccgagt ncctgnctgg catactgnga acgaccaacg acacacccaa gctcggcctc     60
ctcttggnga ttctgggtga catcttcatg aatggcaacc gtgccagwga ggctgtcctc    120
tgggaggcac tacgcaagat gggactgcgt cctggggtga gacatcctct ccttggagat    180
ctaacgaaac ttctcaccta tgagttgtaa agcagaaata cctgnactac agacgagtgc    240
ccaacagcaa cccccggaa gtatgagttc ctctrgggcc tccgttccta ccatgagasc     300
tagcaagatg naagtgttga gantcattgc agaggttcag aaaagagacc cntcgtgact    360
ggtctgcaca gttcatggag gctgcagatg aggccttgga tgctctggat gctgctgcag    420
ctgaggccga agcccgggct gaagcaagaa cccgcatggg aattggagat gaggctgtgt    480
ntgggccctg gagctgggat gacattgagt ttgagctgct gacctgggat gaggaaggag    540
attttggaga tccntggtcc agaattccat ttaccttctg ggccagatac caccagaatg    600
cccgctccag attccctcag acctttgccg gtcccattat tggtcstggt ggt           653

        <210> 364
        <211> 401
        <212> DNA
        <213> Homo sapien

        <400> 364
actagaggaa agacgttaaa ccactctact accacttgtg gaactctcaa agggtaaatg     60
acaaagccaa tgaatgactc taaaaacaat atttacattt aatggtttgt agacaataaa    120
aaaacaaggt ggatagatct agaattgtaa cattttaaga aaaccatagc atttgacaga    180
tgagaaagct caattataga tgcaaagtta taactaaact actatagtag taaagaaata    240
catttcacac ccttcatata aattcactat cttggcttga ggcactccat aaaatgtatc    300
acgtgcatag taaatcttta tatttgctat ggcgttgcac tagaggactt ggactgcaac    360
aagtggatgc gcggaaaatg aaatcttctt caatagccca g                        401

        <210> 365
        <211> 356
        <212> DNA
        <213> Homo sapien

        <400> 365
ccagtgtcat atttgggctt aaaatttcaa gaagggcact tcaaatggct ttgcatttgc     60
atgtttcagt gctagagcgt aggaatagac cctggcgtcc actgtgagat gttcttcagc    120
taccagagca tcaagtctct gcagcaggtc attcttgggt aaagaaatga cttccacaaa    180
ctctccatcc cctggctttg gcttcggcct tgcgttttcg gcatcatctc cgttaatggt    240
gactgtcacg atgtgtatag tacagtttga caagcctggg tccatacaga ccgctggaga    300
acattcggca atgtcccctt tgtagccagt ttcttcttcg agctcccgga gagcag         356

        <210> 366
        <211> 1851
        <212> DNA
        <213> Homo sapien

        <400> 366
tcatcaccat tgccagcagc ggcaccgtta gtcaggtttt ctgggaatcc cacatgagta     60
cttccgtgtt cttcattctt cttcaatagc cataaatctt ctagctctgg ctggctgttt    120
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```
tcacttcctt taagcctttg tgactcttcc tctgatgtca gctttaagtc ttgttctgga    180
ttgctgtttt cagaagagat ttttaacatc tgtttttctt tgtagtcaga aagtaactgg    240
caaattacat gatgatgact agaaacagca tactctctgg ccgtctttcc agatcttgag    300
aagatacatc aacattttgc tcaagtagag ggctgactat acttgctgat ccacaacata    360
cagcaagtat gagagcagtt cttccatatc tatccagcgc atttaaattc gcttttttct    420
tgattaaaaa tttcaccact tgctgttttt gctcatgtat accaagtagc agtggtgtga    480
ggccatgctt gtttttgat tcgatatcag caccgtataa gagcagtgct ttggccatta    540
atttatcttc attgtagaca gcatagtgta gagtggtatt tccatactca tctggaatat    600
ttggatcagt gccatgttcc agcaacatta acgcacattc atcttcctgg cattgtacgg    660
cctttgtcag agctgtcctc tttttgttgt caaggacatt aagttgacat cgtctgtcca    720
gcacgagttt tactacttct gaattcccat tggcagaggc cagatgtaga gcagtcctct    780
tttgcttgtc cctcttgttc acatccgtgt ccctgagcat gacgatgaga tcctttctgg    840
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gtccatccag ggaggaagaa atgcaggaaa tgaaagatgc atgcacgatg gtatactcct   1140
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acagaggatg agatccagaa accacaatat ccattcacaa acaaacactt ttcagccaga   1260
cacaggtact gaaatcatgt catctgcggc aacatggtgg aacctaccca atcacacatc   1320
aagagatgaa gacactgcag tatatctgca caacgtaata ctcttcatcc ataacaaaat   1380
aatataattt tcctctggag ccatatggat gaactatgaa ggaagaactc cccgaagaag   1440
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tgtgtttctt ccccagtgat gcagcctcaa gttatcccga agctgccgca gcacacggtg   1560
gctcctgaga aacaccccag ctcttccggt ctaacacagg caagtcaata aatgtgataa   1620
tcacataaac agaattaaaa gcaaagtcac ataagcatct caacagacac agaaaaggca   1680
tttgacaaaa tccagcatcc ttgtatttat tgttgcagtt ctcagaggaa atgcttctaa   1740
ctttttcccca tttagtatta tgttggctgt gggcttgtca taggtggttt ttattacttt   1800
aaggtatgtc ccttctatgc ctgtttttgct gagggtttta attctcgtgc c            1851
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<210> 367
<211> 668
<212> DNA
<213> Homo sapien

<400> 367
cttgagcttc caaataygga agactggccc ttacacasgt caatgttaaa atgaatgcat     60
ttcagtattt tgaagataaa attrgtagat ctataccttg ttttttgatt cgatatcagc    120
accrtataag agcagtgctt tggccattaa tttatctttc attrtagaca gcrtagtgya    180
gagtggtatt tccatactca tctggaatat ttggatcagt gccatgttcc agcaacatta    240
acgcacattc atcttcctgg cattgtacgg cctgtcagta ttagacccaa aaacaaatta    300
catatcttag gaattcaaaa taacattcca cagctttcac caactagtta tatttaaagg    360
agaaaactca tttttatgcc atgtattgaa atcaaaccca cctcatgctg atatagttgg    420
ctactgcata cctttatcag agctgtcctc tttttgttgt caaggacatt aagttgacat    480
cgtctgtcca gcaggagttt tactacttct gaattcccat tggcagaggc cagatgtaga    540
gcagtcctat gagagtgaga agacttttta ggaaattgta gtgcactagc tacagccata    600
gcaatgattc atgtaactgc aaacactgaa tagcctgcta ttactctgcc ttcaaaaaaa    660
aaaaaaaa                                                             668
```

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<210> 368
<211> 1512
<212> DNA
<213> Homo sapien

<400> 368
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tgggctgggc trgaatcccc tgctggggtt ggcaggtttt ggctgggatt gacttttytc    120
ttcaaacaga ttggaaaccc ggagttacct gctagttggt gaaactggtt ggtagacgcg    180
```

```
atctgttggc  tactactggc  ttctcctggc  tgttaaaagc  agatggtggt  tgaggttgat    240
tccatgccgg  ctgcttcttc  tgtgaagaag  ccatttggtc  tcaggagcaa  gatgggcaag    300
tggtgctgcc  gttgcttccc  ctgctgcagg  gagagcggca  agagcaacgt  gggcacttct    360
ggagaccacg  acgactctgc  tatgaagaca  ctcaggagca  agatgggcaa  gtggtgccgc    420
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gccttcatgg  agcccaggta  ccacgtccgt  ggagaagatc  tggacaagct  ccacagagct    660
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aacaagaagg  acaagcaaaa  gaggactgct  ctacatctgg  cctctgccaa  tgggaattca    780
gaagtagtaa  aactcstgct  ggacagacga  tgtcaactta  atgtccttga  caacaaaaag    840
aggacagctc  tgayaaaggc  cgtacaatgc  caggaagatg  aatgtgcgtt  aatgttgctg    900
gaacatggca  ctgatccaaa  tattccagat  gagtatggaa  ataccactct  rcactaygct    960
rtctayaatg  aagataaatt  aatggccaaa  gcactgctct  tatayggtgc  tgatatcgaa   1020
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taacattgac  gtgtgtaagg  gccagtcttc  cgtatttgga  agctcaagca  taacttgaat   1140
gaaaatattt  tgaaatgacc  taattatctm  agactttatt  ttaaatattg  ttattttcaa   1200
agaagcatta  gagggtacag  ttttttttt  ttaaatgcac  ttctggtaaa  tacttttgtt   1260
gaaaacactg  aatttgtaaa  aggtaatact  tactattttt  caatttttcc  ctcctaggat   1320
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actccaagaa  aagttaaaca  tgtttcagtg  aatagagatc  ctgctccttt  ggcaagttcc   1440
taaaaaacag  taatagatac  gaggtgatgc  gcctgtcagt  ggcaaggttt  aagatatttc   1500
tgatctcgtg  cc                                                           1512
```

```
        <210>  369
        <211>  1853
        <212>  DNA
        <213>  Homo sapien

        <400>  369
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tgggctgggc  trgaatcccc  tgctgggggtt  ggcaggtttt  ggctgggatt  gactttyytc    120
ttcaaacaga  ttggaaaccc  ggagttacct  gctagttggt  gaaactggtt  ggtagacgcg    180
atctgttggc  tactactggc  ttctcctggc  tgttaaaagc  agatggtggt  tgaggttgat    240
tccatgccgg  ctgcttcttc  tgtgaagaag  ccatttggtc  tcaggagcaa  gatgggcaag    300
tggtgctgcc  gttgcttccc  ctgctgcagg  gagagcggca  agagcaacgt  gggcacttct    360
ggagaccacg  acgactctgc  tatgaagaca  ctcaggagca  agatgggcaa  gtggtgccgc    420
cactgcttcc  cctgctgcag  ggggagtggc  aagagcaacg  tgggcgcttc  tggagaccac    480
gacgaytctg  ctatgaagac  actcaggaac  aagatgggca  agtggtgctg  ccactgcttc    540
ccctgctgca  gggggagcrg  caagagcaag  gtgggcgctt  ggggagacta  cgatgacagy    600
gccttcatgg  akcccaggta  ccacgtccrt  ggagaagatc  tggacaagct  ccacagagct    660
gcctggtggg  gtaaagtccc  cagaaaggat  ctcatcgtca  tgctcaggga  cackgaygtg    720
aacaagargg  acaagcaaaa  gaggactgct  ctacatctgg  cctctgccaa  tgggaattca    780
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aggacagctc  tgayaaaggc  cgtacaatgc  caggaagatg  aatgtgcgtt  aatgttgctg    900
gaacatggca  ctgatccaaa  tattccagat  gagtatggaa  ataccactct  rcactaygct    960
rtctayaatg  aagataaatt  aatggccaaa  gcactgctct  tatayggtgc  tgatatcgaa   1020
tcaaaaaaca  agcatggcct  cacaccactg  ytacttggtr  tacatgagca  aaaacagcaa   1080
gtsgtgaaat  ttttaatyaa  gaaaaaagcg  aatttaaaat  gcrctggata  gatatggaag   1140
ractgctctc  atacttgctg  tatgttgtgg  atcagcaagt  atagtcagcc  ytctacttga   1200
gcaaaatrtt  gatgtatctt  ctcaagatct  ggaaagacgg  ccagagagta  tgctgtttct   1260
agtcatcatc  atgtaatttg  ccagttactt  tctgactaca  aagaaaaaca  gatgttaaaa   1320
atctcttctg  aaaacagcaa  tccagaacaa  gacttaaagc  tgacatcaga  ggaagagtca   1380
caaaggctta  aaggaagtga  aaacagccag  ccagaggcat  ggaaacttt  aaatttaaac   1440
ttttggttta  atgtttttt  tttttgcctt  aataatatta  gatagtccca  aatgaaatwa   1500
cctatgagac  taggctttga  gaatcaatag  attctttttt  taagaatctt  ttggctagga   1560
gcggtgtctc  acgcctgtaa  ttccagcacc  ttgagaggct  gaggtgggca  gatcacgaga   1620
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120

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aaacttagct gggtgtggtg gcgggtgcct gtagtcccag ctactcagga rgctgaggca    1740
ggagaatggc atgaacccgg gaggtggagg ttgcagtgag ccgagatccg ccactacact    1800
ccagcctggg tgacagagca agactctgtc tcaaaaaaaa aaaaaaaaaa aaa           1853
```

        <210> 370
        <211> 2184
        <212> DNA
        <213> Homo sapien

        <400> 370
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ggcacgagaa ttaaaaccct cagcaaaaca ggcatagaag ggacatacct taaagtaata     60
aaaaccacct atgacaagcc cacagccaac ataatactaa atggggaaaa gttagaagca    120
tttcctctga gaactgcaac aataaataca aggatgctgg attttgtcaa atgccttttc    180
tgtgtctgtt gagatgctta tgtgactttg cttttaattc tgtttatgtg attatcacat    240
ttattgactt gcctgtgtta gaccggaaga gctggggtgt ttctcaggag ccaccgtgtg    300
ctgcggcagc ttcgggataa cttgaggctg catcactggg gaagaaacac aytcctgtcc    360
gtggcgctga tggctgagga cagagcttca gtgtggcttc tctgcgactg gcttcttcgg    420
ggagttcttc cttcatagtt catccatatg gctccagagg aaaattatat tattttgtta    480
tggatgaaga gtattacgtt gtgcagatat actgcagtgt cttcatctct tgatgtgtga    540
ttgggtaggt tccaccatgt tgccgcagat gacatgattt cagtacctgt gtctggctga    600
aaagtgtttg tttgtgaatg gatattgtgg tttctggatc tcatcctctg tgggtggaca    660
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ccatcgtgca tgcatctttc atttcctgca tttcttcctc cctggatgga caggggggagc    780
ggcaagagca acgtgggcac ttctggagac cacaacgact cctctgtgaa gacgcttggg    840
agcaagaggt gcaagtggtg ctgccactgc ttcccctgct gcaggggagc ggcaagagca    900
acgtggtcgc ttggggagac tacgatgaca gcgccttcat ggatcccagg taccacgtcc    960
atggagaaga tctggacaag ctccacagag ctgcctggtg gggtaaagtc cccagaaagg   1020
atctcatcgt catgctcagg gacacggatg tgaacaagag ggacaagcaa aagaggactg   1080
ctctacatct ggcctctgcc aatgggaatt cagaagtagt aaaactcgtg ctggacagac   1140
gatgtcaact taatgtcctt gacaacaaaa agaggacagc tctgacaaag gccgtacaat   1200
gccaggaaga tgaatgtgcg ttaatgttgc tggaacatgg cactgatcca aatattccag   1260
atgagtatgg aaataccact ctacactatg ctgtctacaa tgaagataaa ttaatggcca   1320
aagcactgct cttatacggt gctgatatcg aatcaaaaaa caagcatggc ctcacaccac   1380
tgctacttgg tatacatgag caaaaacagc aagtggtgaa attttttaatc aagaaaaaag   1440
cgaatttaaa tgcgctggat agatatggaa gaactgctct catacttgct gtatgttgtg   1500
gatcagcaag tatagtcagc cctctacttg agcaaaatgt tgatgtatct tctcaagatc   1560
tggaaagacg gccagagagt atgctgtttc tagtcatcat catgtaattt gccagttact   1620
ttctgactac aaagaaaaac agatgttaaa aatctcttct gaaaacagca atccagaaca   1680
agacttaaag ctgacatcag aggaagagtc acaaaggctt aaaggaagtg aaaacagcca   1740
gccagaggca tggaaacttt taaatttaaa cttttggttt aatgtttttt tttttgcct    1800
taataatatt agatagtccc aaatgaaatw acctatgaga ctaggctttg agaatcaata   1860
gattcttttt ttaagaatct tttggctagg agcggtgtct cacgcctgta attccagcac   1920
cttgagaggc tgaggtgggc agatcacgag atcaggagat cgagaccatc ctggctaaca   1980
cggtgaaacc ccatctctac taaaaataca aaaacttagc tgggtgtggt ggcgggtgcc   2040
tgtagtccca gctactcagg argctgaggc aggagaatgg catgaacccg ggaggtggag   2100
gttgcagtga gccgagatcc gccactacac tccagcctgg gtgacagagc aagactctgt   2160
ctcaaaaaaa aaaaaaaaaa aaaa                                          2184
```

        <210> 371
        <211> 1855
        <212> DNA
        <213> Homo sapien

        <220>
        <221> misc_feature
        <222> (1)...(1855)
        <223> n = A,T,C or G

```
<400> 371
tgcacgcatc ggccagtgtc tgtgccacgt acactgacgc cccctgagat gtgcacgccg      60
cacgcgcacg ttgcacgcgc ggcagcggct tggctggctt gtaacggctt gcacgcgcac     120
gccgcccccg cataaccgtc agactggcct gtaacggctt gcaggcgcac gccgcacgcg     180
cgtaacggct tggctgccct gtaacggctt gcacgtgcat gctgcacgcg cgttaacggc     240
ttggctggca tgtagccgct tggcttggct ttgcattytt tgctkggctk ggcgttgkty   · 300
tcttggattg acgcttcctc cttggatkga cgtttcctcc ttggatkgac gtttcytyty     360
tcgcgttcct ttgctggact tgacctttty tctgctgggt ttggcattcc tttggggtgg     420
gctgggtgtt ttctccgggg gggktkgccc ttcctggggt gggcgtgggk cgcccccagg     480
gggcgtgggc tttccccggg tgggtgtggg ttttcctggg gtggggtggg ctgtgctggg     540
atcccccggc tggggttggc agggattgac tttttttcttc aaacagattg gaaacccgga     600
gtaacntgct agttggtgaa actggttggt agacgcgatc tgctggtact actgtttctc     660
ctggctgtta aaagcagatg gtggctgagg ttgattcaat gccggctgct tcttctgtga     720
agaagccatt tggtctcagg agcaagatgg gcaagtggtg cgccactgct tcccctgctg     780
caggggagc ggcaagagca acgtgggcac ttctggagac cacaacgact cctctgtgaa     840
gacgcttggg agcaagaggt gcaagtggtg ctgcccactg cttcccctgc tgcaggggag     900
cggcaagagc aacgtggkcg cttggggaga ctacgatgac agcgccttca tggakcccag     960
gtaccacgtc crtggagaag atctggacaa gctccacaga gctgcctggt ggggtaaagt    1020
ccccagaaag gatctcatcg tcatgctcag ggacactgay gtgaacaaga rggacaagca    1080
aaagaggact gctctacatc tggcctctgc caatgggaat tcagaagtag taaaactcgt    1140
gctggacaga cgatgtcaac ttaatgtcct tgacaacaaa aagaggacag ctctgacaaa    1200
ggccgtacaa tgccaggaag atgaatgtgc gttaatgttg ctggaacatg gcactgatcc    1260
aaatattcca gatgagtatg gaaataccac tctacactat gctgtctaca atgaagataa    1320
attaatggcc aaagcactgc tcttatacgg tgctgatatc gaatcaaaaa acaaggtata    1380
gatctactaa ttttatcttc aaaatactga aatgcattca ttttaacatt gacgtgtgta    1440
agggccagtc ttccgtattt ggaagctcaa gcataacttg aatgaaaata ttttgaaatg    1500
acctaattat ctaagacttt attttaaata ttgttatttt caaagaagca ttagagggta    1560
cagttttttt tttttaaatg cacttctggt aaatactttt gttgaaaaca ctgaatttgt    1620
aaaaggtaat acttactatt tttcaatttt tccctcctag gattttttc ccctaatgaa    1680
tgtaagatgg caaaatttgc cctgaaatag gttttacatg aaaactccaa gaaaagttaa    1740
acatgtttca gtgaatagag atcctgctcc tttggcaagt tcctaaaaaa cagtaataga    1800
tacgaggtga tgcgcctgtc agtggcaagg tttaagatat ttctgatctc gtgcc         1855
```

```
<210> 372
<211> 1059
<212> DNA
<213> Homo sapien

<400> 372
gcaacgtggg cacttctgga gaccacaacg actcctctgt gaagacgctt gggagcaaga      60
ggtgcaagtg gtgctgccca ctgcttcccc tgctgcaggg gagcggcaag agcaacgtgg     120
gcgcttgrgg agactmcgat gacagygcct tcatggagcc caggtaccac gtccgtggag     180
aagatctgga caagctccac agagctgccc tggtggggta aagtccccag aaaggatctc     240
atcgtcatgc tcagggacac tgaygtgaac aagarggaca agcaaaagag gactgctcta     300
catctggcct ctgccaatgg gaattcagaa gtagtaaaac tcstgctgga cagacgatgt     360
caacttaatg tccttgacaa caaaaagagg acagctctga yaaaggccgt acaatgccag     420
gaagatgaat gtgcgttaat gttgctggaa catggcactg atccaaatat tccagatgag     480
tatggaaata ccactctrca ctaygctrtc tayaatgaag ataaattaat ggccaaagca     540
ctgctcttat ayggtgctga tatcgaatca aaaacaaagg tatagatcta ctaatttat     600
cttcaaaata ctgaaatgca ttcattttaa cattgacgtg tgtaagggcc agtcttccgt     660
atttggaagc tcaagcataa cttgaatgaa aatattttga aatgacctaa ttatctaaga     720
ctttatttta aatattgtta ttttcaaaga agcattagag ggtacagttt ttttttttta     780
aatgcacttc tggtaaatac ttttgttgaa aacactgaat ttgtaaaagg taatacttac     840
tattttttcaa ttttttccctc ctaggatttt tttcccctaa tgaatgtaag atggcaaaat     900
ttgccctgaa ataggtttta catgaaaact ccaagaaaag ttaaacatgt ttcagtgaat     960
agagatcctg ctcctttggc aagttcctaa aaaacagtaa tagatacgag gtgatgcgcc    1020
tgtcagtggc aaggtttaag atatttctga tctcgtgcc                           1059
```

```
<210> 373
<211> 1155
<212> DNA
<213> Homo sapien

<400> 373
atggtggttg aggttgattc catgccggct gcctcttctg tgaagaagcc atttggtctc        60
aggagcaaga tgggcaagtg gtgctgccgt tgcttcccct gctgcaggga gagcggcaag       120
agcaacgtgg gcacttctgg agaccacgac gactctgcta tgaagacact caggagcaag       180
atgggcaagt ggtgccgcca ctgcttcccc tgctgcaggg ggagtggcaa gagcaacgtg       240
ggcgcttctg gagaccacga cgactctgct atgaagacac tcaggaacaa gatgggcaag       300
tggtgctgcc actgcttccc ctgctgcagg gggagcggca agagcaaggt gggcgcttgg       360
ggagactacg atgacagtgc cttcatggag cccaggtacc acgtccgtgg agaagatctg       420
gacaagctcc acagagctgc ctggtggggt aaagtcccca gaaaggatct catcgtcatg       480
ctcagggaca ctgacgtgaa caagaaggac aagcaaaaga ggactgctct acatctggcc       540
tctgccaatg ggaattcaga agtagtaaaa ctcctgctgg acagacgatg tcaacttaat       600
gtccttgaca acaaaaagag gacagctctg ataaaggccg tacaatgcca ggaagatgaa       660
tgtgcgttaa tgttgctgga acatggcact gatccaaata ttccagatga gtatggaaat       720
accactctgc actacgctat ctataatgaa gataaattaa tggccaaagc actgctctta       780
tatggtgctg atatcgaatc aaaaaacaag catggcctca caccactgtt acttggtgta       840
catgagcaaa aacagcaagt cgtgaaattt ttaatcaaga aaaaagcgaa tttaaatgca       900
ctggatagat atggaaggac tgctctcata cttgctgtat gttgtggatc agcaagtata       960
gtcagccttc tacttgagca aaatattgat gtatcttctc aagatctatc tggacagacg      1020
gccagagagt atgctgtttc tagtcatcat catgtaattt gccagttact ttctgactac      1080
aaagaaaaac agatgctaaa aatctcttct gaaaacagca atccagaaaa tgtctcaaga      1140
accagaaata aataa                                                       1155


<210> 374
<211> 2000
<212> DNA
<213> Homo sapien

<400> 374
atggtggttg aggttgattc catgccggct gcctcttctg tgaagaagcc atttggtctc        60
aggagcaaga tgggcaagtg gtgctgccgt tgcttcccct gctgcaggga gagcggcaag       120
agcaacgtgg gcacttctgg agaccacgac gactctgcta tgaagacact caggagcaag       180
atgggcaagt ggtgccgcca ctgcttcccc tgctgcaggg ggagtggcaa gagcaacgtg      ·240
ggcgcttctg gagaccacga cgactctgct atgaagacac tcaggaacaa gatgggcaag       300
tggtgctgcc actgcttccc ctgctgcagg gggagcggca agagcaaggt gggcgcttgg       360
ggagactacg atgacagtgc cttcatggag cccaggtacc acgtccgtgg agaagatctg       420
gacaagctcc acagagctgc ctggtggggt aaagtcccca gaaaggatct catcgtcatg       480
ctcagggaca ctgacgtgaa caagaaggac aagcaaaaga ggactgctct acatctggcc       540
tctgccaatg ggaattcaga agtagtaaaa ctcctgctgg acagacgatg tcaacttaat       600
gtccttgaca acaaaaagag gacagctctg ataaaggccg tacaatgcca ggaagatgaa       660
tgtgcgttaa tgttgctgga acatggcact gatccaaata ttccagatga gtatggaaat       720
accactctgc actacgctat ctataatgaa gataaattaa tggccaaagc actgctctta       780
tatggtgctg atatcgaatc aaaaaacaag catggcctca caccactgtt acttggtgta       840
catgagcaaa aacagcaagt cgtgaaattt ttaatcaaga aaaaagcgaa tttaaatgca       900
ctggatagat atggaaggac tgctctcata cttgctgtat gttgtggatc agcaagtata       960
gtcagccttc tacttgagca aaatattgat gtatcttctc aagatctatc tggacagacg      1020
gccagagagt atgctgtttc tagtcatcat catgtaattt gccagttact ttctgactac      1080
aaagaaaaac agatgctaaa aatctcttct gaaaacagca atccagaaca agacttaaag      1140
ctgacatcag aggaagagtc acaaaggttc aaaggcagtg aaaatagcca gccagagaaa      1200
atgtctcaag aaccagaaat aaataaggat ggtgatagag aggttgaaga agaaatgaag      1260
aagcatgaaa gtaataatgt gggattacta gaaaacctga ctaatggtgt cactgctggc      1320
aatggtgata atggattaat tcctcaaagg aagagcagaa cacctgaaaa tcagcaattt      1380
cctgacaacg aaagtgaaga gtatcacaga atttgcgaat tagtttctga ctacaaagaa      1440
aaacagatgc caaaatactc ttctgaaaac agcaacccag aacaagactt aaagctgaca      1500
```

```
tcagaggaag agtcacaaag gcttgagggc agtgaaaatg gccagccaga gctagaaaat    1560
tttatggcta tcgaagaaat gaagaagcac ggaagtactc atgtcggatt cccagaaaac    1620
ctgactaatg gtgccactgc tggcaatggt gatgatggat taattcctcc aaggaagagc    1680
agaacacctg aaagccagca atttcctgac actgagaatg aagagtatca cagtgacgaa    1740
caaaatgata ctcagaagca attttgtgaa gaacagaaca ctggaatatt acacgatgag    1800
attctgattc atgaagaaaa gcagatagaa gtggttgaaa aaatgaattc tgagctttct    1860
cttagttgta agaaagaaaa agacatcttg catgaaaata gtacgttgcg ggaagaaatt    1920
gccatgctaa gactggagct agacacaatg aaacatcaga gccagctaaa aaaaaaaaaa    1980
aaaaaaaaaa aaaaaaaaa                                                 2000
```

        <210> 375
        <211> 2040
        <212> DNA
        <213> Homo sapien

        <400> 375

```
atggtggttg aggttgattc catgccggct gcctcttctg tgaagaagcc atttggtctc      60
aggagcaaga tgggcaagtg gtgctgccgt tgcttcccct gctgcaggga gagcggcaag     120
agcaacgtgg gcacttctgg agaccacgac gactctgcta tgaagacact caggagcaag     180
atgggcaagt ggtgccgcca ctgcttcccc tgctgcaggg ggagtggcaa gagcaacgtg     240
ggcgcttctg gagaccacga cgactctgct atgaagacac tcaggaacaa gatgggcaag     300
tggtgctgcc actgcttccc ctgctgcagg gggagcggca agagcaaggt gggcgcttgg     360
ggagactacg atgacagtgc cttcatggag cccaggtacc acgtccgtgg agaagatctg     420
gacaagctcc acagagctgc ctggtggggt aaagtcccca gaaaggatct catcgtcatg     480
ctcagggaca ctgacgtgaa caagaaggac aagcaaaaga ggactgctct acatctggcc     540
tctgccaatg ggaattcaga agtagtaaaa ctcctgctgg acagacgatg tcaacttaat     600
gtccttgaca acaaaaagag gacagctctg ataaaggccg tacaatgcca ggaagatgaa     660
tgtgcgttaa tgttgctgga acatggcact gatccaaata ttccagatga gtatggaaat     720
accactctgc actacgctat ctataatgaa gataaattaa tggccaaagc actgctctta     780
tatggtgctg atatcgaatc aaaaaacaag catggcctca caccactgtt acttggtgta     840
catgagcaaa aacagcaagt cgtgaaattt ttaatcaaga aaaaagcgaa tttaaatgca     900
ctggatagat atggaaggac tgctctcata cttgctgtat gttgtggatc agcaagtata     960
gtcagccttc tacttgagca aaatattgat gtatcttctc aagatctatc tggacagacg    1020
gccagagagt atgctgtttc tagtcatcat catgtaattt gccagttact ttctgactac    1080
aaagaaaaac agatgctaaa aatctcttct gaaaacagca atccagaaca agacttaaag    1140
ctgacatcag aggaagagtc acaaaggttc aaaggcagtg aaaatagcca gccagagaaa    1200
atgtctcaag aaccagaaat aaataaggat ggtgatagag aggttgaaga gaaatgaag    1260
aagcatgaaa gtaataatgt gggattacta gaaaacctga ctaatggtgt cactgctggc    1320
aatggtgata atggattaat tcctcaaagg aagagcagaa cacctgaaaa tcagcaattt    1380
cctgacaacg aaagtgaaga gtatcacaga atttgcgaat tagtttctga ctacaaagaa    1440
aaacagatgc aaaatactc ttctgaaaac agcaacccag aacaagactt aaagctgaca    1500
tcagaggaag agtcacaaag gcttgagggc agtgaaaatg gccagccaga gaaaagatct    1560
caagaaccag aaataaataa ggatggtgat agagagctag aaaattttat ggctatcgaa    1620
gaaatgaaga agcacggaag tactcatgtc ggattcccag aaaacctgac taatggtgcc    1680
actgctggca atggtgatga tggattaatt cctccaagga gagcagaac acctgaaagc    1740
cagcaatttc ctgacactga gaatgaagag tatcacagtg acgaacaaaa tgatactcag    1800
aagcaatttt gtgaagaaca gaacactgga atattacacg atgagattct gattcatgaa    1860
gaaaagcaga tagaagtggt tgaaaaaatg aattctgagc tttctcttag ttgtaagaaa    1920
gaaaaagaca tcttgcatga aaatagtacg ttgcgggaag aaattgccat gctaagactg    1980
gagctagaca caatgaaaca tcagagccag ctaaaaaaaa aaaaaaaaaa aaaaaaaaa    2040
```

        <210> 376
        <211> 329
        <212> PRT
        <213> Homo sapien

        <400> 376
Met Asp Ile Val Val Ser Gly Ser His Pro Leu Trp Val Asp Ser Phe

```
 1                    5                    10                   15
Leu His Leu Ala Gly Ser Asp Leu Leu Ser Arg Ser Leu Met Ala Glu
                20                   25                   30
Glu Tyr Thr Ile Val His Ala Ser Phe Ile Ser Cys Ile Ser Ser Ser
                35                   40                   45
Leu Asp Gly Gln Gly Glu Arg Gln Glu Gln Arg Gly His Phe Trp Arg
        50                   55                   60
Pro Gln Arg Leu Leu Cys Glu Asp Ala Trp Glu Gln Glu Val Gln Val
65                   70                   75                   80
Val Leu Pro Leu Leu Pro Leu Leu Gln Gly Ser Gly Lys Ser Asn Val
                85                   90                   95
Val Ala Trp Gly Asp Tyr Asp Asp Ser Ala Phe Met Asp Pro Arg Tyr
               100                  105                  110
His Val His Gly Glu Asp Leu Asp Lys Leu His Arg Ala Ala Trp Trp
        115                  120                  125
Gly Lys Val Pro Arg Lys Asp Leu Ile Val Met Leu Arg Asp Thr Asp
        130                  135                  140
Val Asn Lys Arg Asp Lys Gln Lys Arg Thr Ala Leu His Leu Ala Ser
145                  150                  155                  160
Ala Asn Gly Asn Ser Glu Val Val Lys Leu Val Leu Asp Arg Arg Cys
               165                  170                  175
Gln Leu Asn Val Leu Asp Asn Lys Lys Arg Thr Ala Leu Thr Lys Ala
               180                  185                  190
Val Gln Cys Gln Glu Asp Glu Cys Ala Leu Met Leu Leu Glu His Gly
        195                  200                  205
Thr Asp Pro Asn Ile Pro Asp Glu Tyr Gly Asn Thr Thr Leu His Tyr
        210                  215                  220
Ala Val Tyr Asn Glu Asp Lys Leu Met Ala Lys Ala Leu Leu Leu Tyr
225                  230                  235                  240
Gly Ala Asp Ile Glu Ser Lys Asn Lys His Gly Leu Thr Pro Leu Leu
               245                  250                  255
Leu Gly Ile His Glu Gln Lys Gln Gln Val Val Lys Phe Leu Ile Lys
               260                  265                  270
Lys Lys Ala Asn Leu Asn Ala Leu Asp Arg Tyr Gly Arg Thr Ala Leu
        275                  280                  285
Ile Leu Ala Val Cys Cys Gly Ser Ala Ser Ile Val Ser Pro Leu Leu
        290                  295                  300
Glu Gln Asn Val Asp Val Ser Ser Gln Asp Leu Glu Arg Arg Pro Glu
305                  310                  315                  320
Ser Met Leu Phe Leu Val Ile Ile Met
               325
```

        <210> 377
        <211> 148
        <212> PRT
        <213> Homo sapien

        <220>
        <221> VARIANT
        <222> (1)...(148)
        <223> Xaa = Any Amino Acid

        <400> 377
```
Met Thr Xaa Pro Ser Trp Ser Pro Gly Thr Thr Ser Val Glu Lys Ile
1                    5                    10                   15
Trp Thr Ser Ser Thr Glu Leu Pro Trp Trp Gly Lys Val Pro Arg Lys
               20                   25                   30
Asp Leu Ile Val Met Leu Arg Asp Thr Asp Val Asn Lys Xaa Asp Lys
```

```
                    35                    40                    45
Gln Lys Arg Thr Ala Leu His Leu Ala Ser Ala Asn Gly Asn Ser Glu
        50                    55                    60
Val Val Lys Leu Xaa Leu Asp Arg Arg Cys Gln Leu Asn Val Leu Asp
65                    70                    75                    80
Asn Lys Lys Arg Thr Ala Leu Xaa Lys Ala Val Gln Cys Gln Glu Asp
                85                    90                    95
Glu Cys Ala Leu Met Leu Leu Glu His Gly Thr Asp Pro Asn Ile Pro
                100                   105                   110
Asp Glu Tyr Gly Asn Thr Thr Leu His Tyr Ala Xaa Tyr Asn Glu Asp
            115                   120                   125
Lys Leu Met Ala Lys Ala Leu Leu Leu Tyr Gly Ala Asp Ile Glu Ser
        130                   135                   140
Lys Asn Lys Val
145


        <210> 378
        <211> 1719
        <212> PRT
        <213> Homo sapien

        <400> 378
Met Val Val Glu Val Asp Ser Met Pro Ala Ala Ser Ser Val Lys Lys
1                   5                     10                    15
Pro Phe Gly Leu Arg Ser Lys Met Gly Lys Trp Cys Cys Arg Cys Phe
            20                    25                    30
Pro Cys Cys Arg Glu Ser Gly Lys Ser Asn Val Gly Thr Ser Gly Asp
        35                    40                    45
His Asp Asp Ser Ala Met Lys Thr Leu Arg Ser Lys Met Gly Lys Trp
    50                    55                    60
Cys Arg His Cys Phe Pro Cys Cys Arg Gly Ser Gly Lys Ser Asn Val
65                    70                    75                    80
Gly Ala Ser Gly Asp His Asp Asp Ser Ala Met Lys Thr Leu Arg Asn
                85                    90                    95
Lys Met Gly Lys Trp Cys Cys His Cys Phe Pro Cys Cys Arg Gly Ser
            100                   105                   110
Gly Lys Ser Lys Val Gly Ala Trp Gly Asp Tyr Asp Asp Ser Ala Phe
        115                   120                   125
Met Glu Pro Arg Tyr His Val Arg Gly Glu Asp Leu Asp Lys Leu His
    130                   135                   140
Arg Ala Ala Trp Trp Gly Lys Val Pro Arg Lys Asp Leu Ile Val Met
145                   150                   155                   160
Leu Arg Asp Thr Asp Val Asn Lys Lys Asp Lys Gln Lys Arg Thr Ala
                165                   170                   175
Leu His Leu Ala Ser Ala Asn Gly Asn Ser Glu Val Val Lys Leu Leu
            180                   185                   190
Leu Asp Arg Arg Cys Gln Leu Asn Val Leu Asp Asn Lys Lys Arg Thr
        195                   200                   205
Ala Leu Ile Lys Ala Val Gln Cys Gln Glu Asp Glu Cys Ala Leu Met
        210                   215                   220
Leu Leu Glu His Gly Thr Asp Pro Asn Ile Pro Asp Glu Tyr Gly Asn
225                   230                   235                   240
Thr Thr Leu His Tyr Ala Ile Tyr Asn Glu Asp Lys Leu Met Ala Lys
                245                   250                   255
Ala Leu Leu Leu Tyr Gly Ala Asp Ile Glu Ser Lys Asn Lys His Gly
                260                   265                   270
Leu Thr Pro Leu Leu Leu Gly Val His Glu Gln Lys Gln Gln Val Val
            275                   280                   285
```

126

```
Lys Phe Leu Ile Lys Lys Lys Ala Asn Leu Asn Ala Leu Asp Arg Tyr
    290             295             300
Gly Arg Thr Ala Leu Ile Leu Ala Val Cys Cys Gly Ser Ala Ser Ile
305             310             315             320
Val Ser Leu Leu Leu Glu Gln Asn Ile Asp Val Ser Ser Gln Asp Leu
            325             330             335
Ser Gly Gln Thr Ala Arg Glu Tyr Ala Val Ser Ser His His His Val
            340             345             350
Ile Cys Gln Leu Leu Ser Asp Tyr Lys Glu Lys Gln Met Leu Lys Ile
        355             360             365
Ser Ser Glu Asn Ser Asn Pro Glu Asn Val Ser Arg Thr Arg Asn Lys
    370             375             380
Pro Arg Thr His Met Val Val Glu Val Asp Ser Met Pro Ala Ala Ser
385             390             395             400
Ser Val Lys Lys Pro Phe Gly Leu Arg Ser Lys Met Gly Lys Trp Cys
            405             410             415
Cys Arg Cys Phe Pro Cys Cys Arg Glu Ser Gly Lys Ser Asn Val Gly
            420             425             430
Thr Ser Gly Asp His Asp Asp Ser Ala Met Lys Thr Leu Arg Ser Lys
            435             440             445
Met Gly Lys Trp Cys Arg His Cys Phe Pro Cys Cys Arg Gly Ser Gly
    450             455             460
Lys Ser Asn Val Gly Ala Ser Gly Asp His Asp Asp Ser Ala Met Lys
465             470             475             480
Thr Leu Arg Asn Lys Met Gly Lys Trp Cys Cys His Cys Phe Pro Cys
            485             490             495
Cys Arg Gly Ser Gly Lys Ser Lys Val Gly Ala Trp Gly Asp Tyr Asp
            500             505             510
Asp Ser Ala Phe Met Glu Pro Arg Tyr His Val Arg Gly Glu Asp Leu
        515             520             525
Asp Lys Leu His Arg Ala Ala Trp Trp Gly Lys Val Pro Arg Lys Asp
    530             535             540
Leu Ile Val Met Leu Arg Asp Thr Asp Val Asn Lys Lys Asp Lys Gln
545             550             555             560
Lys Arg Thr Ala Leu His Leu Ala Ser Ala Asn Gly Asn Ser Glu Val
            565             570             575
Val Lys Leu Leu Leu Asp Arg Arg Cys Gln Leu Asn Val Leu Asp Asn
            580             585             590
Lys Lys Arg Thr Ala Leu Ile Lys Ala Val Gln Cys Gln Glu Asp Glu
    595             600             605
Cys Ala Leu Met Leu Leu Glu His Gly Thr Asp Pro Asn Ile Pro Asp
    610             615             620
Glu Tyr Gly Asn Thr Thr Leu His Tyr Ala Ile Tyr Asn Glu Asp Lys
625             630             635             640
Leu Met Ala Lys Ala Leu Leu Leu Tyr Gly Ala Asp Ile Glu Ser Lys
            645             650             655
Asn Lys His Gly Leu Thr Pro Leu Leu Leu Gly Val His Glu Gln Lys
        660             665             670
Gln Gln Val Val Lys Phe Leu Ile Lys Lys Lys Ala Asn Leu Asn Ala
        675             680             685
Leu Asp Arg Tyr Gly Arg Thr Ala Leu Ile Leu Ala Val Cys Cys Gly
    690             695             700
Ser Ala Ser Ile Val Ser Leu Leu Leu Glu Gln Asn Ile Asp Val Ser
705             710             715             720
Ser Gln Asp Leu Ser Gly Gln Thr Ala Arg Glu Tyr Ala Val Ser Ser
            725             730             735
His His His Val Ile Cys Gln Leu Leu Ser Asp Tyr Lys Glu Lys Gln
            740             745             750
```

```
Met Leu Lys Ile Ser Ser Glu Asn Ser Asn Pro Glu Gln Asp Leu Lys
        755                 760                 765
Leu Thr Ser Glu Glu Glu Ser Gln Arg Phe Lys Gly Ser Glu Asn Ser
    770                 775                 780
Gln Pro Glu Lys Met Ser Gln Glu Pro Glu Ile Asn Lys Asp Gly Asp
785                 790                 795                 800
Arg Glu Val Glu Glu Glu Met Lys Lys His Glu Ser Asn Asn Val Gly
            805                 810                 815
Leu Leu Glu Asn Leu Thr Asn Gly Val Thr Ala Gly Asn Gly Asp Asn
        820                 825                 830
Gly Leu Ile Pro Gln Arg Lys Ser Arg Thr Pro Glu Asn Gln Gln Phe
        835                 840                 845
Pro Asp Asn Glu Ser Glu Glu Tyr His Arg Ile Cys Glu Leu Val Ser
    850                 855                 860
Asp Tyr Lys Glu Lys Gln Met Pro Lys Tyr Ser Ser Glu Asn Ser Asn
865                 870                 875                 880
Pro Glu Gln Asp Leu Lys Leu Thr Ser Glu Glu Glu Ser Gln Arg Leu
            885                 890                 895
Glu Gly Ser Glu Asn Gly Gln Pro Glu Leu Glu Asn Phe Met Ala Ile
        900                 905                 910
Glu Glu Met Lys Lys His Gly Ser Thr His Val Gly Phe Pro Glu Asn
    915                 920                 925
Leu Thr Asn Gly Ala Thr Ala Gly Asn Gly Asp Asp Gly Leu Ile Pro
    930                 935                 940
Pro Arg Lys Ser Arg Thr Pro Glu Ser Gln Gln Phe Pro Asp Thr Glu
945                 950                 955                 960
Asn Glu Glu Tyr His Ser Asp Glu Gln Asn Asp Thr Gln Lys Gln Phe
            965                 970                 975
Cys Glu Glu Gln Asn Thr Gly Ile Leu His Asp Glu Ile Leu Ile His
        980                 985                 990
Glu Glu Lys Gln Ile Glu Val Val Glu Lys Met Asn Ser Glu Leu Ser
    995                 1000                1005
Leu Ser Cys Lys Lys Glu Lys Asp Ile Leu His Glu Asn Ser Thr Leu
    1010                1015                1020
Arg Glu Glu Ile Ala Met Leu Arg Leu Glu Leu Asp Thr Met Lys His
1025                1030                1035                1040
Gln Ser Gln Leu Pro Arg Thr His Met Val Val Glu Val Asp Ser Met
            1045                1050                1055
Pro Ala Ala Ser Ser Val Lys Lys Pro Phe Gly Leu Arg Ser Lys Met
            1060                1065                1070
Gly Lys Trp Cys Cys Arg Cys Phe Pro Cys Cys Arg Glu Ser Gly Lys
        1075                1080                1085
Ser Asn Val Gly Thr Ser Gly Asp His Asp Asp Ser Ala Met Lys Thr
    1090                1095                1100
Leu Arg Ser Lys Met Gly Lys Trp Cys Arg His Cys Phe Pro Cys Cys
1105                1110                1115                1120
Arg Gly Ser Gly Lys Ser Asn Val Gly Ala Ser Gly Asp His Asp Asp
            1125                1130                1135
Ser Ala Met Lys Thr Leu Arg Asn Lys Met Gly Lys Trp Cys Cys His
            1140                1145                1150
Cys Phe Pro Cys Cys Arg Gly Ser Gly Lys Ser Lys Val Gly Ala Trp
        1155                1160                1165
Gly Asp Tyr Asp Asp Ser Ala Phe Met Glu Pro Arg Tyr His Val Arg
    1170                1175                1180
Gly Glu Asp Leu Asp Lys Leu His Arg Ala Ala Trp Trp Gly Lys Val
1185                1190                1195                1200
Pro Arg Lys Asp Leu Ile Val Met Leu Arg Asp Thr Asp Val Asn Lys
            1205                1210                1215
```

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```
Lys Asp Lys Gln Lys Arg Thr Ala Leu His Leu Ala Ser Ala Asn Gly
        1220                1225                1230
Asn Ser Glu Val Val Lys Leu Leu Leu Asp Arg Arg Cys Gln Leu Asn
        1235                1240                1245
Val Leu Asp Asn Lys Lys Arg Thr Ala Leu Ile Lys Ala Val Gln Cys
    1250                1255                1260
Gln Glu Asp Glu Cys Ala Leu Met Leu Leu Glu His Gly Thr Asp Pro
1265                1270                1275                1280
Asn Ile Pro Asp Glu Tyr Gly Asn Thr Thr Leu His Tyr Ala Ile Tyr
            1285                1290                1295
Asn Glu Asp Lys Leu Met Ala Lys Ala Leu Leu Leu Tyr Gly Ala Asp
        1300                1305                1310
Ile Glu Ser Lys Asn Lys His Gly Leu Thr Pro Leu Leu Leu Gly Val
        1315                1320                1325
His Glu Gln Lys Gln Gln Val Val Lys Phe Leu Ile Lys Lys Lys Ala
    1330                1335                1340
Asn Leu Asn Ala Leu Asp Arg Tyr Gly Arg Thr Ala Leu Ile Leu Ala
1345                1350                1355                1360
Val Cys Cys Gly Ser Ala Ser Ile Val Ser Leu Leu Leu Glu Gln Asn
            1365                1370                1375
Ile Asp Val Ser Ser Gln Asp Leu Ser Gly Gln Thr Ala Arg Glu Tyr
        1380                1385                1390
Ala Val Ser Ser His His His Val Ile Cys Gln Leu Leu Ser Asp Tyr
        1395                1400                1405
Lys Glu Lys Gln Met Leu Lys Ile Ser Ser Glu Asn Ser Asn Pro Glu
    1410                1415                1420
Gln Asp Leu Lys Leu Thr Ser Glu Glu Glu Ser Gln Arg Phe Lys Gly
1425                1430                1435                1440
Ser Glu Asn Ser Gln Pro Glu Lys Met Ser Gln Glu Pro Glu Ile Asn
                1445                1450                1455
Lys Asp Gly Asp Arg Glu Val Glu Glu Glu Met Lys Lys His Glu Ser
        1460                1465                1470
Asn Asn Val Gly Leu Leu Glu Asn Leu Thr Asn Gly Val Thr Ala Gly
        1475                1480                1485
Asn Gly Asp Asn Gly Leu Ile Pro Gln Arg Lys Ser Arg Thr Pro Glu
    1490                1495                1500
Asn Gln Gln Phe Pro Asp Asn Glu Ser Glu Glu Tyr His Arg Ile Cys
1505                1510                1515                1520
Glu Leu Val Ser Asp Tyr Lys Glu Lys Gln Met Pro Lys Tyr Ser Ser
            1525                1530                1535
Glu Asn Ser Asn Pro Glu Gln Asp Leu Lys Leu Thr Ser Glu Glu Glu
        1540                1545                1550
Ser Gln Arg Leu Glu Gly Ser Glu Asn Gly Gln Pro Glu Lys Arg Ser
    1555                1560                1565
Gln Glu Pro Glu Ile Asn Lys Asp Gly Asp Arg Glu Leu Glu Asn Phe
    1570                1575                1580
Met Ala Ile Glu Glu Met Lys Lys His Gly Ser Thr His Val Gly Phe
1585                1590                1595                1600
Pro Glu Asn Leu Thr Asn Gly Ala Thr Ala Gly Asn Gly Asp Asp Gly
            1605                1610                1615
Leu Ile Pro Pro Arg Lys Ser Arg Thr Pro Glu Ser Gln Gln Phe Pro
        1620                1625                1630
Asp Thr Glu Asn Glu Glu Tyr His Ser Asp Glu Gln Asn Asp Thr Gln
        1635                1640                1645
Lys Gln Phe Cys Glu Glu Gln Asn Thr Gly Ile Leu His Asp Glu Ile
    1650                1655                1660
Leu Ile His Glu Glu Lys Gln Ile Glu Val Val Glu Lys Met Asn Ser
1665                1670                1675                1680
```

```
Glu Leu Ser Leu Ser Cys Lys Lys Glu Lys Asp Ile Leu His Glu Asn
              1685                1690                1695
Ser Thr Leu Arg Glu Glu Ile Ala Met Leu Arg Leu Glu Leu Asp Thr
              1700                1705                1710
Met Lys His Gln Ser Gln Leu
          1715
```

```
        <210> 379
        <211> 656
        <212> PRT
        <213> Homo sapien

        <400> 379
Met Val Val Glu Val Asp Ser Met Pro Ala Ala Ser Ser Val Lys Lys
 1               5                10                15
Pro Phe Gly Leu Arg Ser Lys Met Gly Lys Trp Cys Cys Arg Cys Phe
              20                25                30
Pro Cys Cys Arg Glu Ser Gly Lys Ser Asn Val Gly Thr Ser Gly Asp
          35                40                45
His Asp Asp Ser Ala Met Lys Thr Leu Arg Ser Lys Met Gly Lys Trp
      50                55                60
Cys Arg His Cys Phe Pro Cys Cys Arg Gly Ser Gly Lys Ser Asn Val
65              70                75                      80
Gly Ala Ser Gly Asp His Asp Asp Ser Ala Met Lys Thr Leu Arg Asn
              85                90                      95
Lys Met Gly Lys Trp Cys Cys His Cys Phe Pro Cys Cys Arg Gly Ser
          100              105               110
Gly Lys Ser Lys Val Gly Ala Trp Gly Asp Tyr Asp Asp Ser Ala Phe
          115              120               125
Met Glu Pro Arg Tyr His Val Arg Gly Glu Asp Leu Asp Lys Leu His
    130              135               140
Arg Ala Ala Trp Trp Gly Lys Val Pro Arg Lys Asp Leu Ile Val Met
145              150               155                      160
Leu Arg Asp Thr Asp Val Asn Lys Lys Asp Lys Gln Lys Arg Thr Ala
              165               170               175
Leu His Leu Ala Ser Ala Asn Gly Asn Ser Glu Val Val Lys Leu Leu
          180               185               190
Leu Asp Arg Arg Cys Gln Leu Asn Val Leu Asp Asn Lys Lys Arg Thr
      195               200               205
Ala Leu Ile Lys Ala Val Gln Cys Gln Glu Asp Glu Cys Ala Leu Met
    210               215               220
Leu Leu Glu His Gly Thr Asp Pro Asn Ile Pro Asp Glu Tyr Gly Asn
225               230               235                      240
Thr Thr Leu His Tyr Ala Ile Tyr Asn Glu Asp Lys Leu Met Ala Lys
              245               250               255
Ala Leu Leu Leu Tyr Gly Ala Asp Ile Glu Ser Lys Asn Lys His Gly
          260               265               270
Leu Thr Pro Leu Leu Leu Gly Val His Glu Gln Lys Gln Gln Val Val
          275               280               285
Lys Phe Leu Ile Lys Lys Lys Ala Asn Leu Asn Ala Leu Asp Arg Tyr
    290               295               300
Gly Arg Thr Ala Leu Ile Leu Ala Val Cys Cys Gly Ser Ala Ser Ile
305               310               315                      320
Val Ser Leu Leu Leu Glu Gln Asn Ile Asp Val Ser Ser Gln Asp Leu
              325               330               335
Ser Gly Gln Thr Ala Arg Glu Tyr Ala Val Ser Ser His His His Val
          340               345               350
Ile Cys Gln Leu Leu Ser Asp Tyr Lys Glu Lys Gln Met Leu Lys Ile
```

```
           355                   360                   365
Ser Ser Glu Asn Ser Asn Pro Glu Gln Asp Leu Lys Leu Thr Ser Glu
     370                   375                   380
Glu Glu Ser Gln Arg Phe Lys Gly Ser Glu Asn Ser Gln Pro Glu Lys
385                   390                   395                   400
Met Ser Gln Glu Pro Glu Ile Asn Lys Asp Gly Asp Arg Glu Val Glu
                405                   410                   415
Glu Glu Met Lys Lys His Glu Ser Asn Asn Val Gly Leu Leu Glu Asn
                420                   425                   430
Leu Thr Asn Gly Val Thr Ala Gly Asn Gly Asp Asn Gly Leu Ile Pro
            435                   440                   445
Gln Arg Lys Ser Arg Thr Pro Glu Asn Gln Gln Phe Pro Asp Asn Glu
        450                   455                   460
Ser Glu Glu Tyr His Arg Ile Cys Glu Leu Val Ser Asp Tyr Lys Glu
465                   470                   475                   480
Lys Gln Met Pro Lys Tyr Ser Ser Glu Asn Ser Asn Pro Glu Gln Asp
                485                   490                   495
Leu Lys Leu Thr Ser Glu Glu Glu Ser Gln Arg Leu Glu Gly Ser Glu
                500                   505                   510
Asn Gly Gln Pro Glu Leu Glu Asn Phe Met Ala Ile Glu Glu Met Lys
            515                   520                   525
Lys His Gly Ser Thr His Val Gly Phe Pro Glu Asn Leu Thr Asn Gly
    530                   535                   540
Ala Thr Ala Gly Asn Gly Asp Asp Gly Leu Ile Pro Pro Arg Lys Ser
545                   550                   555                   560
Arg Thr Pro Glu Ser Gln Gln Phe Pro Asp Thr Glu Asn Glu Glu Tyr
                565                   570                   575
His Ser Asp Glu Gln Asn Asp Thr Gln Lys Gln Phe Cys Glu Glu Gln
            580                   585                   590
Asn Thr Gly Ile Leu His Asp Glu Ile Leu Ile His Glu Glu Lys Gln
        595                   600                   605
Ile Glu Val Val Glu Lys Met Asn Ser Glu Leu Ser Leu Ser Cys Lys
    610                   615                   620
Lys Glu Lys Asp Ile Leu His Glu Asn Ser Thr Leu Arg Glu Glu Ile
625                   630                   635                   640
Ala Met Leu Arg Leu Glu Leu Asp Thr Met Lys His Gln Ser Gln Leu
                645                   650                   655


        <210> 380
        <211> 671
        <212> PRT
        <213> Homo sapien

        <400> 380
Met Val Val Glu Val Asp Ser Met Pro Ala Ala Ser Ser Val Lys Lys
1                   5                   10                  15
Pro Phe Gly Leu Arg Ser Lys Met Gly Lys Trp Cys Cys Arg Cys Phe
            20                  25                  30
Pro Cys Cys Arg Glu Ser Gly Lys Ser Asn Val Gly Thr Ser Gly Asp
        35                  40                  45
His Asp Asp Ser Ala Met Lys Thr Leu Arg Ser Lys Met Gly Lys Trp
    50                  55                  60
Cys Arg His Cys Phe Pro Cys Cys Arg Gly Ser Gly Lys Ser Asn Val
65                  70                  75                  80
Gly Ala Ser Gly Asp His Asp Asp Ser Ala Met Lys Thr Leu Arg Asn
            85                  90                  95
Lys Met Gly Lys Trp Cys Cys His Cys Phe Pro Cys Cys Arg Gly Ser
        100                 105                 110
```

```
Gly Lys Ser Lys Val Gly Ala Trp Gly Asp Tyr Asp Asp Ser Ala Phe
        115                 120             125
Met Glu Pro Arg Tyr His Val Arg Gly Glu Asp Leu Asp Lys Leu His
    130                 135             140
Arg Ala Ala Trp Trp Gly Lys Val Pro Arg Lys Asp Leu Ile Val Met
145                 150             155                 160
Leu Arg Asp Thr Asp Val Asn Lys Lys Asp Lys Gln Lys Arg Thr Ala
                165             170             175
Leu His Leu Ala Ser Ala Asn Gly Asn Ser Glu Val Val Lys Leu Leu
            180             185             190
Leu Asp Arg Arg Cys Gln Leu Asn Val Leu Asp Asn Lys Lys Arg Thr
        195             200             205
Ala Leu Ile Lys Ala Val Gln Cys Gln Glu Asp Glu Cys Ala Leu Met
    210             215             220
Leu Leu Glu His Gly Thr Asp Pro Asn Ile Pro Asp Glu Tyr Gly Asn
225             230             235                 240
Thr Thr Leu His Tyr Ala Ile Tyr Asn Glu Asp Lys Leu Met Ala Lys
                245             250             255
Ala Leu Leu Leu Tyr Gly Ala Asp Ile Glu Ser Lys Asn Lys His Gly
            260             265             270
Leu Thr Pro Leu Leu Leu Gly Val His Glu Gln Lys Gln Gln Val Val
        275             280             285
Lys Phe Leu Ile Lys Lys Lys Ala Asn Leu Asn Ala Leu Asp Arg Tyr
    290             295             300
Gly Arg Thr Ala Leu Ile Leu Ala Val Cys Cys Gly Ser Ala Ser Ile
305             310             315                 320
Val Ser Leu Leu Leu Glu Gln Asn Ile Asp Val Ser Ser Gln Asp Leu
            325             330             335
Ser Gly Gln Thr Ala Arg Glu Tyr Ala Val Ser Ser His His His Val
            340             345             350
Ile Cys Gln Leu Leu Ser Asp Tyr Lys Glu Lys Gln Met Leu Lys Ile
        355             360             365
Ser Ser Glu Asn Ser Asn Pro Glu Gln Asp Leu Lys Leu Thr Ser Glu
    370             375             380
Glu Glu Ser Gln Arg Phe Lys Gly Ser Glu Asn Ser Gln Pro Glu Lys
385             390             395                 400
Met Ser Gln Glu Pro Glu Ile Asn Lys Asp Gly Asp Arg Glu Val Glu
            405             410             415
Glu Glu Met Lys Lys His Glu Ser Asn Asn Val Gly Leu Leu Glu Asn
        420             425             430
Leu Thr Asn Gly Val Thr Ala Gly Asn Gly Asp Asn Gly Leu Ile Pro
        435             440             445
Gln Arg Lys Ser Arg Thr Pro Glu Asn Gln Gln Phe Pro Asp Asn Glu
    450             455             460
Ser Glu Glu Tyr His Arg Ile Cys Glu Leu Val Ser Asp Tyr Lys Glu
465             470             475                 480
Lys Gln Met Pro Lys Tyr Ser Ser Glu Asn Ser Asn Pro Glu Gln Asp
            485             490             495
Leu Lys Leu Thr Ser Glu Glu Glu Ser Gln Arg Leu Glu Gly Ser Glu
            500             505             510
Asn Gly Gln Pro Glu Lys Arg Ser Gln Glu Pro Glu Ile Asn Lys Asp
        515             520             525
Gly Asp Arg Glu Leu Glu Asn Phe Met Ala Ile Glu Glu Met Lys Lys
        530             535             540
His Gly Ser Thr His Val Gly Phe Pro Glu Asn Leu Thr Asn Gly Ala
545             550             555                 560
Thr Ala Gly Asn Gly Asp Asp Gly Leu Ile Pro Pro Arg Lys Ser Arg
            565             570             575
```

```
Thr Pro Glu Ser Gln Gln Phe Pro Asp Thr Glu Asn Glu Glu Tyr His
            580                 585                 590
Ser Asp Glu Gln Asn Asp Thr Gln Lys Gln Phe Cys Glu Glu Gln Asn
            595                 600                 605
Thr Gly Ile Leu His Asp Glu Ile Leu Ile His Glu Glu Lys Gln Ile
            610                 615                 620
Glu Val Val Glu Lys Met Asn Ser Glu Leu Ser Leu Ser Cys Lys Lys
625                 630                 635                 640
Glu Lys Asp Ile Leu His Glu Asn Ser Thr Leu Arg Glu Glu Ile Ala
            645                 650                 655
Met Leu Arg Leu Glu Leu Asp Thr Met Lys His Gln Ser Gln Leu
            660                 665                 670
```

```
        <210> 381
        <211> 251
        <212> DNA
        <213> Homo sapien

        <400> 381
ggagaagcgt ctgctggggc aggaaggggt ttccctgccc tctcacctgt ccctcaccaa    60
ggtaacatgc ttcccctaag ggtatcccaa cccagggggcc tcaccatgac ctctgagggg   120
ccaatatccc aggagaagca ttggggagtt gggggcaggt gaaggaccca ggactcacac   180
atcctgggcc tccaaggcag aggagagggt cctcaagaag gtcaggagga aaatccgtaa   240
caagcagtca g                                                        251
```

```
<210> 382
<211> 3279
<212> DNA
<213> Homo sapiens

<400> 382
cttcctgcag cccccatgct ggtgagggggc acgggcagga acagtggacc caacatggaa 60
atgctggagg gtgtcaggaa gtgatcgggc tctggggcag ggaggagggg tggggagtgt 120
cactgggagg ggacatcctg cagaaggtag gagtgagcaa acacccgctg caggggaggg 180
gagagccctg cggcacctgg gggagcagag ggagcagcac ctgcccaggc ctgggaggag 240
gggcctggag ggcgtgagga ggagcgaggg ggctgcatgg ctggagtgag ggatcagggg 300
cagggcgcga gatggcctca cacagggaag agagggcccc tcctgcaggg cctcacctgg 360
gccacaggag gacactgctt ttcctctgag gagtcaggag ctgtggatgg tgctggacag 420
aagaaggaca gggcctggct caggtgtcca gaggctgtcg ctggcttccc tttgggatca 480
gactgcaggg agggagggcg gcaggggttgt ggggggagtg acgatgagga tgacctgggg 540
gtggctccag gccttgcccc tgcctgggcc ctcacccagc ctccctcaca gtctcctggc 600
cctcagtctc tcccctccac tccatcctcc atctggcctc agtgggtcat tctgatcact 660
gaactgacca tacccagccc tgcccacggc cctccatggc tccccaatgc cctggagagg 720
ggacatctag tcagagagta gtcctgaaga ggtggcctct gcgatgtgcc tgtgggggca 780
gcatcctgca gatggtcccg gccctcatcc tgctgacctg tctgcaggga ctgtcctcct 840
ggaccttgcc ccttgtgcag gagctggacc ctgaagtccc ctccccatag gccaagactg 900
gagccttgtt ccctctgttg gactccctgc ccatattctt gtgggagtgg gttctggaga 960
catttctgtc tgttcctgag agctgggaat tgctctcagt catctgcctg cgcggttctg 1020
agagatggag ttgcctaggc agttattggg gccaatcttt ctcactgtgt ctctcctcct 1080
ttacccttag ggtgattctg ggggtccact tgtctgtaat ggtgtgcttc aaggtatcac 1140
atcatggggc cctgagccat gtgccctgcc tgaaaagcct gctgtgtaca ccaaggtggt 1200
gcattaccgg aagtggatca aggacaccat cgcagccaac ccctgagtgc ccctgtccca 1260
cccctacctc tagtaaattt aagtccacct cacgttctgg catcacttgg cctttctgga 1320
tgctggacac ctgaagcttg gaactcacct ggccgaagct cgagcctcct gagtcctact 1380
gacctgtgct ttctggtgtg gagtccaggg ctgctaggaa aaggaatggg cagacacagg 1440
tgtatgccaa tgtttctgaa atgggtataa tttcgtcctc tccttcggaa cactggctgt 1500
ctctgaagac ttctcgctca gtttcagtga ggacacacac aaagacgtgg gtgaccatgt 1560
tgtttgtggg gtgcagagat gggagggggtg gggcccaccc tggaagagtg gacagtgaca 1620
```

```
caaggtggac actctctaca gatcactgag gataagctgg agccacaatg catgaggcac 1680
acacacagca aggttgacgc tgtaaacata gcccacgctg tcctgggggc actgggaagc 1740
ctagataagg ccgtgagcag aaagaagggg aggatcctcc tatgttgttg aaggagggac 1800
tagggggaga aactgaaagc tgattaatta caggaggttt gttcaggtcc cccaaaccac 1860
cgtcagattt gatgatttcc tagcaggact tacagaaata aagagctatc atgctgtggt 1920
ttattatggt ttgttacatt gataggatac atactgaaat cagcaaacaa aacagatgta 1980
tagattagag tgtggagaaa acagaggaaa acttgcagtt acgaagactg gcaacttggc 2040
tttactaagt tttcagactg gcaggaagtc aaacctatta ggctgaggac cttgtggagt 2100
gtagctgatc cagctgatag aggaactagc caggtggggg cctttccctt tggatggggg 2160
gcatatccga cagttattct ctccaagtgg agacttacgg acagcatata attctccctg 2220
caaggatgta tgataatatg tacaaagtaa ttccaactga ggaagctcac ctgatcctta 2280
gtgtccaggg tttttactgg gggtctgtag gacgagtatg gagtacttga ataattgacc 2340
tgaagtcctc agacctgagg ttccctagag ttcaaacaga tacagcatgg tccagagtcc 2400
cagatgtaca aaaacaggga ttcatcacaa atcccatctt tagcatgaag ggtctggcat 2460
ggcccaaggc cccaagtata tcaaggcact tgggcagaac atgccaagga atcaaatgtc 2520
atctcccagg agttattcaa gggtgagccc tttacttggg atgtacaggc tttgagcagt 2580
gcagggctgc tgagtcaacc tttttattgta caggggatga gggaaaggga gaggatgagg 2640
aagcccccct ggggatttgg tttggtcttg tgatcaggtg gtctatgggg ctatccctac 2700
aaagaagaat ccagaaatag gggcacattg aggaatgata ctgagcccaa agagcattca 2760
atcattgttt tatttgcctt cttttcacac cattggtgag ggagggatta ccaccctggg 2820
gttatgaaga tggttgaaca ccccacacat agcaccggag atatgagatc aacagtttct 2880
tagccataga gattcacagc ccagagcagg aggacgctgc acaccatgca ggatgacatg 2940
ggggatgcgc tcgggattgg tgtgaagaag caaggactgt tagaggcagg cttttatagta 3000
acaagacggt ggggcaaact ctgatttccg tgggggaatg tcatggtctt gctttactaa 3060
gttttgagac tggcaggtag tgaaactcat taggctgaga accttgtgga atgcagctga 3120
cccagctgat agaggaagta gccaggtggg agcctttccc agtgggtgtg ggacatatct 3180
ggcaagattt tgtggcactc ctggttacag atactggggc agcaaataaa actgaatctt 3240
gttttcagac cttaaaaaaa aaaaaaaaaa aaaagtttt                         3279
```

```
<210> 383
<211> 154
<212> PRT
<213> Homo sapiens

<400> 383
Met Ala Gly Val Arg Asp Gln Gly Gln Gly Ala Arg Trp Pro His Thr
                5                  10                  15

Gly Lys Arg Gly Pro Leu Leu Gln Gly Leu Thr Trp Ala Thr Gly Gly
                20                  25                  30

His Cys Phe Ser Ser Glu Glu Ser Gly Ala Val Asp Gly Ala Gly Gln
                35                  40                  45

Lys Lys Asp Arg Ala Trp Leu Arg Cys Pro Glu Ala Val Ala Gly Phe
     50                  55                  60

Pro Leu Gly Ser Asp Cys Arg Glu Gly Gly Arg Gln Gly Cys Gly Gly
65                  70                  75                  80

Ser Asp Asp Glu Asp Asp Leu Gly Val Ala Pro Gly Leu Ala Pro Ala
                85                  90                  95

Trp Ala Leu Thr Gln Pro Pro Ser Gln Ser Pro Gly Pro Gln Ser Leu
                100                 105                 110

Pro Ser Thr Pro Ser Ser Ile Trp Pro Gln Trp Val Ile Leu Ile Thr
                115                 120                 125
```

```
Glu Leu Thr Ile Pro Ser Pro Ala His Gly Pro Pro Trp Leu Pro Asn
    130                 135.                 140

Ala Leu Glu Arg Gly His Leu Val Arg Glu
145                 150
```

```
<210> 384
<211> 557
<212> DNA
<213> Homo sapiens
```

```
<400> 384
ggatcctcta gagcggccgc ctactactac taaattcgcg gccgcgtcga cgaagaagag 60
aaagatgtgt tttgtttggg actctctgtg gtcccttcca atgctgtggg tttccaacca 120
ggggaagggt cccttttgca ttgccaagtg ccataaccat gagcactact ctaccatggt 180
tctgcctcct ggccaagcag gctggtttgc aagaatgaaa tgaatgattc tacagctagg 240
acttaacctt gaaatggaaa gtcttgcaat cccatttgca ggatccgtct gtgcacatgc 300
ctctgtagag agcagcattc ccagggacct tggaaacagt tggcactgta aggtgcttgc 360
tccccaagac acatcctaaa aggtgttgta atggtgaaaa cgtcttcctt ctttattgcc 420
ccttcttatt tatgtgaaca actgtttgtc tttttttgta tcttttttaa actgtaaagt 480
tcaattgtga aaatgaatat catgcaaata aattatgcga ttttttttttc aaagtaaaaa 540
aaaaaaaaaa aaaaaaa                                               557
```

```
<210> 385
<211> 337
<212> DNA
<213> Homo sapiens
```

```
<400> 385
ttcccaggtg atgtgcgagg gaagacacat ttactatcct tgatggggct gattcctta 60
gtttctctag cagcagatgg gttaggagga agtgacccaa gtggttgact cctatgtgca 120
tctcaaagcc atctgctgtc ttcgagtacg gacacatcat cactcctgca ttgttgatca 180
aaacgtggag gtgcttttcc tcagctaaga agcccttagc aaaagctcga atagacttag 240
tatcagacag gtccagtttc cgcaccaaca cctgctggtt ccctgtcgtg gtctggatct 300
ctttggccac caattccccc ttttccacat cccggca                         337
```

```
<210> 386
<211> 300
<212> DNA
<213> Homo sapiens
```

```
<400> 386
gggcccgcta ccggcccagg ccccgcctcg cgagtcctcc tccccgggtg cctgcccgca 60
gcccgctcgg cccagagggt gggcgcgggg ctgcctctac cggctggcgg ctgtaactca 120
gcgaccttgg cccgaaggct ctagcaagga cccaccgacc ccagccgcgg cggcggcggc 180
gcggactttg cccggtgtgt ggggcggagc ggactgcgtg tccgcggacg ggcagcgaag 240
atgttagcct tcgctgccag gaccgtggac cgatcccagg gctgtggtgt aacctcagcc 300
```

```
<210> 387
<211> 537
<212> DNA
<213> Homo sapiens
```

```
<400> 387
gggccgagtc gggcaccaag ggactctttg caggcttcct tcctcggatc atcaaggctg 60
ccccctcctg tgccatcatg atcagcacct atgagttcgg caaaagcttc ttccagaggc 120
```

```
tgaaccagga ccggcttctg ggcggctgaa aggggcaagg aggcaaggac cccgtctctc 180
ccacggatgg ggagagggca ggaggagacc cagccaagtg ccttttcctc agcactgagg 240
gaggggctt  gtttcccttc cctcccggcg acaagctcca gggcagggct gtccctctgg 300
gcggcccagc acttcctcag acacaacttc ttcctgctgc tccagtcgtg gggatcatca 360
cttacccacc ccccaagttc aagaccaaat cttccagctg cccccttcgt gtttccctgt 420
gtttgctgta gctgggcatg tctccaggaa ccaagaagcc ctcagcctgg tgtagtctcc 480
ctgacccttg ttaattcctt aagtctaaag atgatgaact tcaaaaaaaa aaaaaaa    537
```

<210> 388
<211> 520
<212> DNA
<213> Homo sapiens

<400> 388
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aggataattt ttaaaccaat caaatgaaaa aaacaaacaa acaaaaaagg aaatgtcatg 60
tgaggttaaa ccagtttgca ttcccctaat gtggaaaaag taagaggact actcagcact 120
gtttgaagat tgcctcttct acagcttctg agaattgtgt tatttcactt gccaagtgaa 180
ggaccccctc cccaacatgc cccagcccac ccctaagcat ggtcccttgt caccaggcaa 240
ccaggaaact gctacttgtg gacctcacca gagaccagga gggtttggtt agctcacagg 300
acttcccccca ccccagaaga ttagcatccc atactagact catactcaac tcaactaggc 360
tcatactcaa ttgatggtta ttagacaatt ccatttcttt ctggttatta taaacagaaa 420
atctttcctc ttctcattac cagtaaaggc tcttggtatc tttctgttgg aatgatttct 480
atgaacttgt cttattttaa tggtgggttt tttttctggt               520
```

<210> 389
<211> 365
<212> DNA
<213> Homo sapiens

<400> 389
```
cgttgcccca gtttgacaga aggaaaggcg gagcttattc aaagtctaga gggagtggag 60
gagttaaggc tggatttcag atctgcctgg ttccagccgc agtgtgccct ctgctccccc 120
aacgactttc caaataatct caccagcgcc ttccagctca ggcgtcctag aagcgtcttg 180
aagcctatgg ccagctgtct ttgtgttccc tctcacccgc ctgtcctcac agctgagact 240
cccaggaaac cttcagacta ccttcctctg ccttcagcaa ggggcgttgc ccacattctc 300
tgagggtcag tggaagaacc tagactccca ttgctagagg tagaaagggg aagggtgctg 360
gggag                                                    365
```

<210> 390
<211> 221
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(221)
<223> n = A,T,C or G

<400> 390
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tgcctctcca tcctggcccc gacttctctg tcaggaaagt ggggatggac cccatctgca 60
tacacggntt ctcatgggtg tggaacatct ctgcttgcgg tttcaggaag gcctctggct 120
gctctangag tctgancnga ntcgttgccc cantntgaca naaggaaagg cggagcttat 180
tcaaagtcta gagggagtgg aggagttaag ctggatttc a               221
```

<210> 391
<211> 325
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(325)
<223> n = A,T,C or G

<400> 391
tggagcaggt cccgaggcct ccctagagcc tggggccgac tctgtgncga tgcangcttt 60
ctctcgcgcc cagcctggag ctgctcctgg catctaccaa caatcagncg aggcgagcag 120
tagccagggc actgctgcca acagccagtc cnnataccat catgtnaccc ggtgngctct 180
naanttngat ntccanagcc ctacccatcn tagttctgct ctcccaccgg ntaccagccc 240
cactgcccag gaatcctaca gccagtaccc tgtcccgacg tctctaccta ccagtacgat 300
gagacctccg gctactacta tgacc   325

<210> 392
<211> 277
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(277)
<223> n = A,T,C or G

<400> 392
atattgttta actccttcct ttatatcttt taacattttc atggngaaag gttcacatct 60
agtctcactt nggcnagngn ctcctacttg agtctcttcc ccggcctgnn ccagtngnaa 120
antaccanga accgncatgn cttaanaacn ncctggtttn tgggttnntc aatgactgca 180
tgcagtgcac caccctgtcc actacgtgat gctgtaggat taaagtctca cagtgggcgg 240
ctgaggatac agcgccgcgt cctgtgttgc tggggaa   277

<210> 393
<211> 566
<212> DNA
<213> Homo sapiens

<400> 393
actagtccag tgtggtggaa ttcgcggccg cgtcgacgga caggtcagct gtctggctca 60
gtgatctaca ttctgaagtt gtctgaaaat gtcttcatga ttaaattcag cctaaacgtt 120
ttgccgggaa cactgcagag acaatgctgt gagtttccaa ccttagccca tctgcgggca 180
gagaaggtct agtttgtcca tcagcattat catgatatca ggactggtta cttggttaag 240
gaggggtcta ggagatctgt cccttttaga gacaccttac ttataatgaa gtatttggga 300
gggtggtttt caaaagtaga aatgtcctgt attccgatga tcatcctgta aacattttat 360
catttattaa tcatccctgc ctgtgtctat tattatattc atatctctac gctggaaact 420
ttctgcctca atgtttactg tgcctttgtt tttgctagtt tgtgttgttg aaaaaaaaaa 480
cattctctgc ctgagtttta atttttgtcc aaagttattt taatctatac aattaaaagc 540
ttttgcctat caaaaaaaaa aaaaaa   566

<210> 394
<211> 384
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(384)
<223> n = A,T,C or G

```
<400> 394
gaacatacat gtcccggcac ctgagctgca gtctgacatc atcgccatca cgggcctcgc 60
tgcaaattng gaccgggcca aggctggact gctggagcgt gtgaaggagc tacaggccna 120
gcaggaggac cgggctttaa ggagttttaa gctgagtgtc actgtagacc ccaaatacca 180
tcccaagatt atcgggagaa agggggcagt aattacccaa atccggttgg agcatgacgt 240
gaacatccag tttcctgata aggacgatgg gaaccagccc caggaccaaa ttaccatcac 300
agggtacgaa aagaacacag aagctgccag ggatgctata ctgagaattg tgggtgaact 360
tgagcagatg gtttctgagg acgt                                        384

<210> 395
<211> 399
<212> DNA
<213> Homo sapiens

<400> 395
ggcaaaactg tgtgacctca ataagacctc gcagatccaa ggtcaagtat cagaagtgac 60
tctgaccttg gactccaaga cctacatcaa cagcctggct atattagatg atgagccagt 120
tatcagaggt ttcatcattg cggaaattgt ggagtctaag gaaatcatgg cctctgaagt 180
attcacgtct ttccagtacc ctgagttctc tatagagttg cctaacacag gcagaattgg 240
ccagctactt gtctgcaatt gtatcttcaa gaataccctg gccatccctt tgactgacgt 300
caagttctct ttggaaagcc tgggcatctc ctcactacag acctctgacc atgggacggt 360
gcagcctggt gagaccatcc aatcccaaat aaaatgcac                        399

<210> 396
<211> 403
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(403)
<223> n = A,T,C or G

<400> 396
tggagttntc agtgcaaaca agccataaag cttcagtagc aaattactgt ctcacagaaa 60
gacattttca acttctgctc cagctgctga taaaacaaat catgtgttta gcttgactcc 120
agacaaggac aacctgttcc ttcataactc tctagagaaa aaaaggagtt gttagtagat 180
actaaaaaaa gtggatgaat aatctggata tttttcctaa aaagattcct tgaaacacat 240
taggaaaatg gagggcctta tgatcagaat gctagaatta gtccattgtg ctgaagcagg 300
gtttagggga gggagtgagg gataaaagaa ggaaaaaaag aagagtgaga aaacctattt 360
atcaaagcag gtgctatcac tcaatgttag gccctgctct ttt                   403

<210> 397
<211> 100
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(100)
<223> n = A,T,C or G

<400> 397
actagtncag tgtggtggaa ttcgcggccg cgtcgaccta naanccatct ctatagcaaa 60
tccatccccg ctcctggttg gtnacagaat gactgacaaa                       100

<210> 398
<211> 278
```

138

```
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(278)
<223> n = A,T,C or G

<400> 398
gcggccgcgt cgacagcagt tccgccagcg ctcgcccctg ggtggggatg tgctgcacgc 60
ccacctggac atctggaagt cagcggcctg gatgaaagag cggacttcac ctggggcgat 120
tcactactgt gcctcgacca gtgaggagag ctggaccgac agcgaggtgg actcatcatg 180
ctccgggcag cccatccacc tgtggcagtt cctcaaggag ttgctactca agccccacag 240
ctatggccgc ttcattangt ggctcaacaa ggagaagg 278

<210> 399
<211> 298
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(298)
<223> n = A,T,C or G

<400> 399
acggaggtgg aggaagcgnc cctgggatcg anaggatggg tcctgncatt gaccncctcn 60
ggggtgccng catggagcgc atgggcgcgg gcctgggcca cggcatggat cgcgtgggct 120
ccgagatcga gcgcatgggc ctggtcatgg accgcatggg ctccgtggag cgcatgggct 180
ccggcattga gcgcatgggc ccgctgggcc tcgaccacat ggcctccanc attgancgca 240
tgggccagac catggagcgc attggctctg gcgtggagcn catgggtgcc ggcatggg 298

<210> 400
<211> 548
<212> DNA
<213> Homo sapiens

<400> 400
acatcaacta cttcctcatt ttaaggtatg gcagttccct tcatcccctt ttcctgcctt 60
gtacatgtac atgtatgaaa tttccttctc ttaccgaact ctctccacac atcacaaggt 120
caaagaacca cacgcttaga agggtaagag ggcaccctat gaaatgaaat ggtgatttct 180
tgagtctctt ttttccacgt ttaaggggcc atggcaggac ttagagttgc gagttaagac 240
tgcagagggc tagagaatta tttcatacag gctttgaggc cacccatgtc acttatcccg 300
tataccctct caccatcccc ttgtctactc tgatgccccc aagatgcaac tgggcagcta 360
gttggcccca taattctggg cctttgttgt ttgtttttaat tacttgggca tcccaggaag 420
ctttccagtg atctcctacc atgggccccc ctcctgggat caagcccctc ccaggccctg 480
tccccagccc ctcctgcccc agcccacccg cttgccttgg tgctcagccc tcccattggg 540
agcaggtt 548

<210> 401
<211> 355
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(355)
<223> n = A,T,C or G
```

<400> 401
actgtttcca tgttatgttt ctacacattg ctacctcagt gctcctggaa acttagcttt 60
tgatgtctcc aagtagtcca ccttcattta actctttgaa actgtatcat cttttgccaag 120
taagagtggt ggcctatttc agctgctttg acaaaatgac tggctcctga cttaacgttc 180
tataaatgaa tgtgctgaag caaagtgccc atggtggcgg cgaagaagan aaagatgtgt 240
tttgttttgg actctctgtg gtcccttcca atgctgnggg tttccaacca ggggaagggt 300
cccttttgca ttgccaagtg ccataaccat gagcactact ctaccatggn tctgc   355

<210> 402
<211> 407
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(407)
<223> n = A,T,C or G

<400> 402
atggggcaag ctggataaag aaccaagacc cactggagta tgctgtcttc aagaaaccca 60
tctcacatgc ggtggcatac ataggctcaa aataaaggaa tggagaaaaa tatttcaagc 120
aaatggaaaa cagaaaaaag caggtgttgc actcctactt tctgacaaaa cagactatgc 180
gaataaagat aaaaaagaga aggacattac aaaggtggtc ctgacctttg ataaatctca 240
ttgcttgata ccaacctggg ctgtttttaat tgcccaaacc aaaaggataa tttgctgagg 300
ttgtggagct tctcccctgc agagagtccc tgatctccca aaatttggtt gagatgtaag 360
gntgattttg ctgacaactc cttttctgaa gttttactca tttccaa   407

<210> 403
<211> 303
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(303)
<223> n = A,T,C or G

<400> 403
cagtatttat agccnaactg aaaagctagt agcaggcaag tctcaaatcc aggcaccaaa 60
tcctaagcaa gagccatggc atggtgaaaa tgcaaaagga gagtctggcc aatctacaaa 120
tagagaacaa gacctactca gtcatgaaca aaaaggcaga caccaacatg gatctcatgg 180
gggattggat attgtaatta tagagcagga agatgacagt gatcgtcatt tggcacaaca 240
tcttaacaac gaccgaaacc cattatttac ataaacctcc attcggtaac catgttgaaa 300
gga   303

<210> 404
<211> 225
<212> DNA
<213> Homo sapiens

<400> 404
aagtgtaact tttaaaaatt tagtggattt tgaaaattct tagaggaaag taaaggaaaa 60
attgttaatg cactcattta cctttacatg gtgaaagttc tctcttgatc ctacaaacag 120
acattttcca ctcgtgtttc catagttgtt aagtgtatca gatgtgttgg gcatgtgaat 180
ctccaagtgc ctgtgtaata aataaagtat ctttatttca ttcat   225

<210> 405

<210> 405

<211> 334
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(334)
<223> n = A,T,C or G

<400> 405
gagctgttat actgtgagtt ctactaggaa atcatcaaat ctgagggttg tctggaggac 60
ttcaatacac ctcccccccat agtgaatcag cttccagggg gtccagtccc tctccttact 120
tcatccccat cccatgccaa aggaagaccc tccctccttg gctcacagcc ttctctaggc 180
ttcccagtgc ctccaggaca gagtgggtta tgttttcagc tccatccttg ctgtgagtgt 240
ctggtgcggt tgtgcctcca gcttctgctc agtgcttcat ggacagtgtc cagcccatgt 300
cactctccac tctctcanng tggatcccac ccct   334

<210> 406
<211> 216
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(216)
<223> n = A,T,C or G

<400> 406
tttcatacct aatgagggag ttganatnac atnnaaccag gaaatgcatg gatctcaang 60
gaaacaaaca cccaataaac tcggagtggc agactgacaa ctgtgagaca tgcacttgct 120
acnaaacaca aatttnatgt tgcacccttg tttctacacc tgtgggttat gacaaagaca 180
actgccaaag aatnttcaag aaggaggact gccant   216

<210> 407
<211> 413
<212> DNA
<213> Homo sapiens

<400> 407
gctgacttgc tagtatcatc tgcattcatt gaagcacaag aacttcatgc cttgactcat 60
gtaaatgcaa taggattaaa aaataaattt gatatcacat ggaaacagac aaaaaatatt 120
gtacaacatt gcacccagtg tcagattcta cacctggcca ctcaggaagc aagagttaat 180
cccagaggtc tatgtcctaa tgtgttatgg caaatggatg tcatgcacgt accttcattt 240
ggaaaattgt catttgtcca tgtgacagtt gatacttatt cacatttcat atgggcaacc 300
tgccagacag gagaaagtct tcccatgtta aaagacattt attatcttgt tttcctgtca 360
tgggagttcc agaaaaagtt aaaacagaca atgggccagg ttctgtagta aag   413

<210> 408
<211> 183
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(183)
<223> n = A,T,C or G

<400> 408

```
ggagctngcc ctcaattcct ccatntctat gttancatat ttaatgtctt ttgnnattaa 60
tncttaacta gttaatcctt aaagggctan ntaatcctta actagtccct ccattgtgag 120
cattatcctt ccagtattcn ccttctnttt tatttactcc ttcctggcta cccatgtact 180
ntt                                                            183
```

```
<210> 409
<211> 250
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(250)
<223> n = A,T,C or G
```

```
<400> 409
cccacgcatg ataagctctt tatttctgta agtcctgcta ggaaatcatc aaatctgacg 60
gtggtttggg ggacctgaac aaacctcctg taattaatca gctttcagtt tctcccccta 120
gtccctcctt caacaacata ggaggatcct ccccttcttt ctgctcacgg ccttatctag 180
gcttcccagt gcccccagga cagcgtgggc tatgtttaca gcgcntcctt gctggggggg 240
ggccntatgc                                                     250
```

```
<210> 410
<211> 306
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(306)
<223> n = A,T,C or G
```

```
<400> 410
ggctggtttg caagaatgaa atgaatgatt ctacagctag gacttaacct tgaaatggaa 60
agtcttgcaa tcccatttgc aggatccgtc tgtgcacatg cctctgtaga gagcagcatt 120
cccagggacc ttggaaacag ttggcactgt aaggtgcttg ctccccaaga cacatcctaa 180
aaggtgttgt aatggtgaaa accgcttcct tctttattgc cccttcttat ttatgtgaac 240
nactggttgg ctttttttgn atctttttta aactggaaag ttcaattgng aaaatgaata 300
tcntgc                                                         306
```

```
<210> 411
<211> 261
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(261)
<223> n = A,T,C or G
```

```
<400> 411
agagatattn cttaggtnaa agttcataga gttcccatga actatatgac tggccacaca 60
ggatcttttg tatttaagga ttctgagatt ttgcttgagc aggattagat aaggctgttc 120
tttaaatgtc tgaaatggaa cagatttcaa aaaaaaaccc cacaatctag ggtgggaaca 180
aggaaggaaa gatgtgaata ggctgatggg caaaaaacca atttacccat cagttccagc 240
cttctctcaa ggngaggcaa a                                         261
```

```
<210> 412
```

```
<211> 241
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(241)
<223> n = A,T,C or G

<400> 412
gttcaatgtt acctgacatt tctacaacac cccactcacc gatgtattcg ttgcccagtg 60
ggaacatacc agcctgaatt tggaaaaaat aattgtgttt cttgcccagg aaatactacg 120
actgactttg atggctccac aaacataacc cagtgtaaaa acagaagatg tggaggggag 180
ctgggagatt tcactgggta cattgaattc ccaaactacc cangcaatta cccagccaac 240
a                                                                   241

<210> 413
<211> 231
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(231)
<223> n = A,T,C or G

<400> 413
aactcttaca atccaagtga ctcatctgtg tgcttgaatc ctttccactg tctcatctcc 60
ctcatccaag tttctagtac cttctctttg ttgtgaagga taatcaaact gaacaacaaa 120
aagtttactc tcctcatttg gaacctaaaa actctcttct tcctgggtct gagggctcca 180
agaatccttg aatcanttct cagatcattg gggacaccan atcaggaacc t            231

<210> 414
<211> 234
<212> DNA
<213> Homo sapiens

<400> 414
actgtccatg aagcactgag cagaagctgg aggcacaacg caccagacac tcacagcaag 60
gatggagctg aaaacataac ccactctgtc ctggaggcac tgggaagcct agagaaggct 120
gtgagccaag gagggagggt cttcctttgg catgggatgg ggatgaagta aggagaggga 180
ctggaccccc tggaagctga ttcactatgg ggggaggtgt attgaagtcc tcca        234

<210> 415
<211> 217
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(217)
<223> n = A,T,C or G

<400> 415
gcataggatt aagactgagt atcttttcta cattctttta actttctaag gggcacttct 60
caaaacacag accaggtagc aaatctccac tgctctaagg ntctcaccac cactttctca 120
cacctagcaa tagtagaatt cagtcctact tctgaggcca gaagaatggt tcagaaaaat 180
antggattat aaaaaataac aattaagaaa aataatc                           217
```

143

```
<210> 416
<211> 213
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(213)
<223> n = A,T,C or G

<400> 416
atgcatatnt aaagganact gcctcgcttt tagaagacat ctggnctgct ctctgcatga 60
ggcacagcag taaagctctt tgattcccag aatcaagaac tctcccttc agactattac 120
cgaatgcaag gtggttaatt gaaggccact aattgatgct caaatagaag gatattgact 180
atattggaac agatggagtc tctactacaa aag                             213

<210> 417
<211> 303
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(303)
<223> n = A,T,C or G

<400> 417
nagtcttcag gcccatcagg gaagttcaca ctggagagaa gtcatacata tgtactgtat 60
gtgggaaagg ctttactctg agttcaaatc ttcaagccca tcagagagtc cacactggag 120
agaagccata caaatgcaat gagtgtggga agagcttcag gagggattcc cattatcaag 180
ttcatctagt ggtccacaca ggagagaaac cctataaatg tgagatatgt gggaagggct 240
tcantcaaag ttcgtatctt caaatccatc ngaaggncca cagtatanan aaacctttta 300
agt                                                             303

<210> 418
<211> 328
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(328)
<223> n = A,T,C or G

<400> 418
tttttggcgg tggtggggca gggacgggac angagtctca ctctgttgcc caggctggag 60
tgcacaggca tgatctcggc tcactacaac ccctgcctcc catgtccaag cgattcttgt 120
gcctcagcct tccctgtagc tagaattaca ggcacatgcc accacaccca gctagttttt 180
gtattttag tagagacagg gtttcaccat gttggccagg ctggtctcaa actcctnacc 240
tcagnggtca ggctggtctc aaactcctga cctcaagtga tctgcccacc tcagcctccc 300
aaagtgctan gattacaggc cgtgagcc                                  328

<210> 419
<211> 389
<212> DNA
<213> Homo sapiens
```

```
<220>
<221> misc_feature
<222> (1)...(389)
<223> n = A,T,C or G

<400> 419
cctcctcaag acggcctgtg gtccgcctcc cggcaaccaa gaagcctgca gtgccatatg 60
acccctgagc catggactgg agcctgaaag gcagcgtaca ccctgctcct gatcttgctg 120
cttgtttcct ctctgtggct ccattcatag cacagttgtt gcactgaggc ttgtgcaggc 180
cgagcaaggc caagctggct caaagagcaa ccagtcaact ctgccacggt gtgccaggca 240
ccggttctcc agccaccaac ctcactcgct cccgcaaatg gcacatcagt tcttctaccc 300
taaaggtagg accaaagggc atctgctttt ctgaagtcct ctgctctatc agccatcacg 360
tggcagccac tcnggctgtg tcgacgcgg                                   389


<210> 420
<211> 408
<212> DNA
<213> Homo sapiens

<400> 420
gttcctccta actcctgcca gaaacagctc tcctcaacat gagagctgca cccctcctcc 60
tggccagggc agcaagcctt agccttggct tcttgtttct gcttttttc tggctagacc 120
gaagtgtact agccaaggag ttgaagtttg tgactttggt gtttcggcat ggagaccgaa 180
gtcccattga cacctttccc actgacccca taaggaatc ctcatggcca caaggatttg 240
gccaactcac ccagctgggc atggagcagc attatgaact tggagagtat ataagaaaga 300
gatatagaaa attcttgaat gagtcctata aacatgaaca ggtttatatt cgaagcacag 360
acgttgaccg gactttgatg aagtgctatg acaaacctgg caagcccg              408


<210> 421
<211> 352
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(352)
<223> n = A,T,C or G

<400> 421
gctcaaaaat cttttactg atnggcatgg ctacacaatc attgactatt acggaggcca 60
gaggagaatg aggcctggcc tgggagccct gtgcctacta naagcacatt agattatcca 120
ttcactgaca gaacaggtct tttttgggtc cttcttctcc accacnatat acttgcagtc 180
ctccttcttg aagattcttt ggcagttgtc tttgtcataa cccacaggtg tagaaacaag 240
ggtgcaacat gaaatttctg tttcgtagca agtgcatgtc tcacaagttg gcangtctgc 300
cactccgagt ttattgggtg tttgtttcct ttgagatcca tgcatttcct gg          352


<210> 422
<211> 337
<212> DNA
<213> Homo sapiens

<400> 422
atgccaccat gctggcaatg cagcgggcgg tcgaaggcct gcatatccag cccaagctgg 60
cgatgatcga cggcaaccgt tgcccgaagt tgccgatgcc agccgaagcg gtggtcaagg 120
gcgatagcaa ggtgccggcg atcgcggcgg cgtcaatcct ggccaaggtc agccgtgatc 180
gtgaaatggc agctgtcgaa ttgatctacc cgggttatgg catcggcggg cataagggct 240
atccgacacc ggtgcacctg gaagccttgc agcggctggg gccgacgccg attcaccgac 300
gcttcttccg ccggtacggc tggcctatga aaattat                          337
```

<210> 423
<211> 310
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(310)
<223> n = A,T,C or G

<400> 423
gctcaaaaat cttttttactg atatggcatg gctacacaat cattgactat tagaggccag 60
aggagaatga ggcctggcct gggagccctg tgcctactan aagcncatta gattatccat 120
tcactgacag aacaggtctt ttttgggtcc ttcttctcca ccacgatata cttgcagtcc 180
tccttcttga agattctttg gcagttgtct ttgtcataac ccacaggtgt anaaacaagg 240
gtgcaacatg aaatttctgt ttcgtagcaa gtgcatgtct cacagttgtc aagtctgccc 300
tccgagttta   310

<210> 424
<211> 370
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(370)
<223> n = A,T,C or G

<400> 424
gctcaaaaat cttttttactg ataggcatgg ctacacaatc attgactatt agaggccaga 60
ggagaatgag gcctggcctg ggagccctgt gcctactaga agcacattag attatccatt 120
cactgacaga acaggtcttt tttgggtcct tcttctccac cacgatatac ttgcagtcct 180
ccttcttgaa gattctttgg cagttgtctt tgtcataacc cacaggtgta gaaacatcct 240
ggttgaatct cctggaactc cctcattagg tatgaaatag catgatgcat tgcataaagt 300
cacgaaggtg gcaaagatca caacgctgcc cagganaaca ttcattgtga taagcaggac 360
tccgtcgacg   370

<210> 425
<211> 216
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(216)
<223> n = A,T,C or G

<400> 425
aattgctatn ntttattttg ccactcaaaa taattaccaa aaaaaaaaaa tnttaaatga 60
taacaacnca acatcaaggn aaananaaca ggaatggntg actntgcata aatnggccga 120
anattatcca ttatnttaag ggttgacttc aggntacagc acacagacaa acatgcccag 180
gaggntntca ggaccgctcg atgtnttntg aggagg   216

<210> 426
<211> 596
<212> DNA
<213> Homo sapiens

```
<400> 426
cttccagtga ggataaccct gttgccccgg gccgaggttc tccattaggc tctgattgat 60
tggcagtcag tgatggaagg gtgttctgat cattccgact gccccaaggg tcgctggcca 120
gctctctgtt ttgctgagtt ggcagtagga cctaatttgt taattaagag tagatggtga 180
gctgtccttg tattttgatt aacctaatgg ccttcccagc acgactcgga ttcagctgga 240
gacatcacgg caacttttaa tgaaatgatt tgaagggcca ttaagaggca cttcccgtta 300
ttaggcagtt catctgcact gataacttct tggcagctga gctggtcgga gctgtggccc 360
aaacgcacac ttggcttttg gttttgagat acaactctta atcttttagt catgcttgag 420
ggtggatggc ctttttcagct ttaacccaat ttgcactgcc ttggaagtgt agccaggaga 480
atacactcat atactcgtgg gcttagaggc cacagcagat gtcattggtc tactgcctga 540
gtcccgctgg tcccatccca ggaccttcca tcggcgagta cctgggagcc cgtgct   596
```

```
<210> 427
<211> 107
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(107)
<223> n = A,T,C or G

<400> 427
gaagaattca agttaggttt attcaaaggg cttacngaga atcctanacc caggncccag 60
cccgggagca gccttanaga gctcctgttt gactgcccgg ctcagng          107
```

```
<210> 428
<211> 38
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(38)
<223> n = A,T,C or G

<400> 428
gaacttccna anaangactt tattcactat tttacatt                      38
```

```
<210> 429
<211> 544
<212> DNA
<213> Homo sapiens

<400> 429
ctttgctgga cggaataaaa gtggacgcaa gcatgacctc ctgatgaggg cgctgcattt 60
attgaagagc ggctgcagcc ctgcggttca gattaaaatc cgagaattgt atagacgccg 120
atatccacga actcttgaag gactttctga tttatccaca atcaaatcat cggttttcag 180
tttggatggt ggctcatcac ctgtagaacc tgacttggcc gtggctggaa tccactcgtt 240
gccttccact tcagttacac ctcactcacc atcctctcct gttggttctg tgctgcttca 300
agatactaag cccacatttg agatgcagca gccatctccc ccaattcctc ctgtccatcc 360
tgatgtgcag ttaaaaaatc tgcccttttta tgatgtcctt gatgttctca tcaagcccac 420
gagtttagtt caaagcagta ttcagcgatt tcaagagaag tttttttattt ttgctttgac 480
acctcaacaa gttagagaga tatgcatatc cagggatttt ttgccaggtg gtaggagaga 540
ttat                                                             544
```

```
<210> 430
```

<210> 507
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(507)
<223> n = A,T,C or G

<400> 430
cttatcncaa tggggctccc aaacttggct gtgcagtgga aactccgggg gaattttgaa 60
gaacactgac acccatcttc cacccgaca ctctgattta attgggctgc agtgagaaca 120
gagcatcaat ttaaaaagct gcccagaatg ttntcctggg cagcgttgtg atctttgccn 180
ccttcgtgac tttatgcaat gcatcatgct atttcatacc taatgaggga gttccaggag 240
attcaaccag gatgtttcta cncctgtggg ttatgacaaa gacaactgcc aaagaatntt 300
caagaaggag gactgcaagt atatcgtggt ggagaagaag gacccaaaaa agacctgttc 360
tgtcagtgaa tggataatct aatgtgcttc tagtaggcac agggctccca ggccaggcct 420
cattctcctc tggcctctaa tagtcaatga ttgtgtagcc atgcctatca gtaaaaagat 480
ttttgagcaa aaaaaaaaaa aaaaaaa   507

<210> 431
<211> 392
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(392)
<223> n = A,T,C or G

<400> 431
gaaaattcag aatggataaa aacaaatgaa gtacaaaata tttcagattt acatagcgat 60
aaacaagaaa gcacttatca ggaggactta caaatggaag tacactctan aaccatcatc 120
tatcatggct aaatgtgaga ttagcacagc tgtattattt gtacattgca aacacctaga 180
aagagatggg aaacaaaatc ccaggagttt tgtgtgtgga gtcctgggtt ttccaacaga 240
catcattcca gcattctgag attagggnga ttggggatca ttctggagtt ggaatgttca 300
acaaaagtga tgttgttagg taaaatgtac aacttctgga tctatgcaga cattgaaggt 360
gcaatgagtc tggcttttac tctgctgttt ct   392

<210> 432
<211> 387
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(387)
<223> n = A,T,C or G

<400> 432
ggtatccnta cataatcaaa tatagctgta gtacatgttt tcattggngt agattaccac 60
aaatgcaagg caacatgtgt agatctcttg tcttattctt ttgtctataa tactgtattg 120
ngtagtccaa gctctcggna gtccagccac tgngaaacat gctcccttta gattaacctc 180
gtggacnctn ttgttgnatt gtctgaactg tagngccctg tattttgctt ctgtctgnga 240
attctgttgc ttctggggca tttccttgng atgcagagga ccaccacaca gatgacagca 300
atctgaattg ntccaatcac agctgcgatt aagacatact gaaatcgtac aggaccggga 360
acaacgtata gaacactgga gtccttt   387

148

```
<210> 433
<211> 281
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(281)
<223> n = A,T,C or G

<400> 433
ttcaactagc anagaanact gcttcagggn gtgtaaaatg aaaggcttcc acgcagttat 60
ctgattaaag aacactaaga gagggacaag gctagaagcc gcaggatgtc tacactatag 120
caggcnctat ttgggttggc tggaggagct gtggaaaaca tggagagatt ggcgctggag 180
atcgccgtgg ctattcctcn ttgntattac accagngagg ntctctgtnt gcccactggt 240
tnnaaaaccg ntatacaata atgatagaat aggacacaca t                     281

<210> 434
<211> 484
<212> DNA
<213> Homo sapiens

<400> 434
ttttaaaata agcatttagt gctcagtccc tactgagtac tctttctctc ccctcctctg 60
aatttaattc tttcaacttg caatttgcaa ggattacaca tttcactgtg atgtatattg 120
tgttgcaaaa aaaaaaaagt gtctttgttt aaaattactt ggtttgtgaa tccatcttgc 180
ttttttcccca ttggaactag tcattaaccc atctctgaac tggtagaaaa acatctgaag 240
agctagtcta tcagcatctg acaggtgaat tggatggttc tcagaaccat ttcacccaga 300
cagcctgttt ctatcctgtt taataaatta gtttgggttc tctacatgca taacaaaccc 360
tgctccaatc tgtcacataa aagtctgtga cttgaagttt agtcagcacc cccaccaaac 420
tttattttc tatgtgtttt ttgcaacata tgagtgtttt gaaataaag tacccatgtc 480
ttta                                                              484

<210> 435
<211> 424
<212> DNA
<213> Homo sapiens

<400> 435
gcgccgctca gagcaggtca ctttctgcct tccacgtcct ccttcaagga agccccatgt 60
gggtagcttt caatatcgca ggttcttact cctctgcctc tataagctca aacccaccaa 120
cgatcgggca agtaaacccc ctccctcgcc gacttcggaa ctggcgagag ttcagcgcag 180
atgggcctgt ggggagggggg caagatagat gaggggggagc ggcatggtgc ggggtgaccc 240
cttggagaga ggaaaaaggc cacaagaggg gctgccaccg ccactaacgg agatggccct 300
ggtagagacc tttgggggtc tggaacctct ggactcccca tgctctaact cccacactct 360
gctatcagaa acttaaactt gaggattttc tctgttttc actcgcaata aattcagagc 420
aaac                                                              424

<210> 436
<211> 667
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(667)
<223> n = A,T,C or G
```

<400> 436
accttgggaa nactctcaca atataaaggg tcgtagactt tactccaaat tccaaaaagg 60
tcctggccat gtaatcctga aagttttccc aaggtagcta taaaatcctt ataagggtgc 120
agcctcttct ggaattcctc tgatttcaaa gtctcactct caagttcttg aaaacgaggg 180
cagttcctga aaggcaggta tagcaactga tcttcagaaa gaggaactgt gtgcaccggg 240
atgggctgcc agagtaggat aggattccag atgctgacac cttctggggg aaacagggct 300
gccaggtttg tcatagcact catcaaagtc cggtcaacgt ctgtgcttcg aatataaacc 360
tgttcatgtt tataggactc attcaagaat tttctatatc tctttcttat atactctcca 420
agttcataat gctgctccat gcccagctgg gtgagttggc caaatccttg tggccatgag 480
gattccttta tggggtcagt gggaaaggtg tcaatgggac ttcggtctcc atgccgaaac 540
accaaagtca caaacttcaa ctccttggct agtacacttc ggtctagcca gaaaaaaagc 600
agaaacaaga agccaaggct aaggcttgct gccctgccag gaggaggggt gcagctctca 660
tgttgag   667

<210> 437
<211> 693
<212> DNA
<213> Homo sapiens

<400> 437
ctacgtctca accctcattt ttaggtaagg aatcttaagt ccaaagatat taagtgactc 60
acacagccag gtaaggaaag ctggattggc acactaggac tctaccatac cgggttttgt 120
taaagctcag gttaggaggc tgataagctt ggaaggaact tcagacagct ttttcagatc 180
ataaagata attcttagcc catgttcttc tccagagcag acctgaaatg acagcacagc 240
aggtactcct ctattttcac ccctcttgct tctactctct ggcagtcaga cctgtgggag 300
gccatgggag aaagcagctc tctggatgtt tgtacagatc atggactatt ctctgtggac 360
catttctcca ggttacccta ggtgtcacta ttgggggggac agccagcatc tttagctttc 420
atttgagttt ctgtctgtct tcagtagagg aaacttttgc tcttcacact tcacatctga 480
acacctaact gctgttgctc ctgaggtggt gaaagacaga tatagagctt acagtattta 540
tcctatttct aggcactgag ggctgtgggg taccttgtgg tgccaaaaca gatcctgttt 600
taaggacatg ttgcttcaga gatgtctgta actatctggg ggctctgttg gctctttacc 660
ctgcatcatg tgctctcttg gctgaaaatg acc   693

<210> 438
<211> 360
<212> DNA
<213> Homo sapiens

<400> 438
ctgcttatca caatgaatgt tctcctgggc agcgttgtga tctttgccac cttcgtgact 60
ttatgcaatg catcatgcta tttcatacct aatgagggag ttccaggaga ttcaaccagg 120
atgtttctac acctgtgggt tatgacaaag acaactgcca aagaatcttc aagaaggagg 180
actgcaagta tatctggtgg agaagaagga cccaaaaaag acctgttctg tcagtgaatg 240
gataatctaa tgtgcttcta gtaggcacag ggctcccagg ccaggcctca ttctcctctg 300
gcctctaata gtcaataatt gtgtagccat gcctatcagt aaaaagattt ttgagcaaac 360

<210> 439
<211> 431
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(431)
<223> n = A,T,C or G

<400> 439
gttcctnnta actcctgcca gaaacagctc tcctcaacat gagagctgca cccctcctcc 60

```
tggccagggc agcaagcctt agccttggct tcttgtttct gctttttttc tggctagacc 120
gaagtgtact agccaaggag ttgaagtttg tgactttggt gtttcggcat ggagaccgaa 180
gtcccattga caccttccc .actgacccca taaaggaatc ctcatggcca caaggatttg 240
gccaactcac ccagctgggc atggagcagc attatgaact tggagagtat ataagaaaga 300
gatatagaaa attcttgaat gagtcctata aacatgaaca ggtttatatt cgaagcacag 360
acgttgaccg gactttgatg agtgctatga caaacctggc agcccgtcga cgcggccgcg 420
aatttagtag t                                                   431
```

```
<210> 440
<211> 523
<212> DNA
<213> Homo sapiens
```

```
<400> 440
agagataaag cttaggtcaa agttcataga gttcccatga actatatgac tggccacaca 60
ggatcttttg tatttaagga ttctgagatt ttgcttgagc aggattagat aaggctgttc 120
tttaaatgtc tgaaatggaa cagatttcaa aaaaaaaccc cacaatctag ggtgggaaca 180
aggaaggaaa gatgtgaata ggctgatggg caaaaaacca atttacccat cagttccagc 240
cttctctcaa ggagaggcaa agaaaggaga tacagtggag acatctggaa agttttctcc 300
actggaaaac tgctactatc tgttttttata tttctgttaa aatatatgag gctacagaac 360
taaaaattaa aacctctttg tgtcccttgg tcctggaaca tttatgttcc ttttaaagaa 420
acaaaaatca aactttacag aaagatttga tgtatgtaat acatatagca gctcttgaag 480
tatatatatc atagcaaata agtcatctga .tgagaacaag cta                523
```

```
<210> 441
<211> 430
<212> DNA
<213> Homo sapiens
```

```
<400> 441
gttcctccta actcctgcca gaaacagctc tcctcaacat gagagctgca cccctcctcc 60
tggccagggc agcaagcctt agccttggct tcttgtttct gctttttttc tggctagacc 120
gaagtgtact agccaaggag ttgaagtttg tgactttggt gtttcggcat ggagaccgaa 180
gtcccattga caccttccc actgacccca taaaggaatc ctcatggcca caaggatttg 240
gccaactcac ccagctgggc atggagcagc attatgaact tggagagtat ataagaaaga 300
gatatagaaa attcttgaat gagtcctata aacatgaaca ggtttatatt cgaagcacag 360
acgttgaccg gactttgatg agtgctatga caaacctggc agcccgtcga cgcggccgcg 420
aatttagtag                                                      430
```

```
<210> 442
<211> 362
<212> DNA
<213> Homo sapiens
```

```
<400> 442
ctaaggaatt agtagtgttc ccatcacttg tttggagtgt gctattctaa aagattttga 60
tttcctggaa tgacaattat attttaactt tggtggggga aagagttata ggaccacagt 120
cttcacttct gatacttgta aattaatctt ttattgcact tgttttgacc attaagctat 180
atgtttagaa atggtcattt tacggaaaaa ttagaaaaat tctgataata gtgcagaata 240
aatgaattaa tgttttactt. aatttatatt gaactgtcaa tgacaaataa aaattctttt 300
tgattatttt ttgttttcat ttaccagaat aaaaactaag aattaaaagt ttgattacag 360
tc                                                              362
```

```
<210> 443
<211> 624
<212> DNA
<213> Homo sapiens
```

```
<220>
<221> misc_feature
<222> (1)...(624)
<223> n = A,T,C or G

<400> 443
tttttttttt gcaacacaat atacatcaca gtgaaatgtg taatccttgc aaattgcaag 60
ttgaaagaat taaattcaga ggaggggaga gaaagagtac tcagtaggga ctgagcacta 120
aatgcttatt ttaaaagaaa tgtaaagagc agaaagcaat tcaggctacc ctgccttttg 180
tgctggctag tactccggtc ggtgtcagca gcacgtggca ttgaacattg caatgtggag 240
cccaaaccac agaaaatggg gtgaaattgg ccaactttct attaacttgg cttcctgttt 300
tataaaatat tgtgaataat atcacctact tcaaagggca gttatgaggc ttaaatgaac 360
taacgcctac aaaacactta aacatagata acataggtgc aagtactatg tatctggtac 420
atggtaaaca tccttattat taaagtcaac gctaaaatga atgtgtgtgc atatgctaat 480
agtacagaga gagggcactt aaaccaacta agggcctgga gggaaggttt cctggaaaga 540
ngatgcttgt gctgggtcca aatcttggtc tactatgacc ttggccaaat tatttaaact 600
ttgtccctat ctgctaaaca gatc                                      624

<210> 444
<211> 425
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(425)
<223> n = A,T,C or G

<400> 444
gcacatcatt nntcttgcat tctttgagaa taagaagatc agtaaatagt tcagaagtgg 60
gaagctttgt ccaggcctgt gtgtgaaccc aatgttttgc ttagaaatag aacaagtaag 120
ttcattgcta tagcataaca caaaatttgc ataagtggtg gtcagcaaat ccttgaatgc 180
tgcttaatgt gagaggttgg taaaatcctt tgtgcaacac tctaactccc tgaatgtttt 240
gctgtgctgg gacctgtgca tgccagacaa ggccaagctg gctgaaagag caaccagcca 300
cctctgcaat ctgccacctc ctgctggcag gatttgtttt tgcatcctgt gaagagccaa 360
ggaggcacca gggcataagt gagtagactt atggtcgacg cggccgcgaa tttagtagta 420
gtaga                                                           425

<210> 445
<211> 414
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(414)
<223> n = A,T,C or G

<400> 445
catgtttatg nttttggatt actttgggca cctagtgttt ctaaatcgtc tatcattctt 60
ttctgttttt caaaagcaga gatggccaga gtctcaacaa actgtatctt caagtctttg 120
tgaaattctt tgcatgtggc agattattgg atgtagtttc ctttaactag catataaatc 180
tggtgtgttt cagataaatg aacagcaaaa tgtggtggaa ttaccatttg gaacattgtg 240
aatgaaaaat tgtgtctcta gattatgtaa caaataacta tttcctaacc attgatcttt 300
ggatttttat aatcctactc acaaatgact aggcttctcc tcttgtattt tgaagcagtg 360
tgggtgctgg attgataaaa aaaaaaaaag tcgacgcggc cgcgaattta gtag     414

<210> 446
```

<210> 631
<212> DNA
<213> Homo sapiens

<220>.
<221> misc_feature
<222> (1)...(631)
<223> n = A,T,C or G

<400> 446
```
acaaattaga anaaagtgcc agagaacacc acataccttg tccggaacat tacaatggct 60
tctgcatgca tgggaagtgt gagcattcta tcaatatgca ggagccatct tgcaggtgtg 120
atgctggtta tactggacaa cactgtgaaa aaaaggacta cagtgttcta tacgttgttc 180
ccggtcctgt acgatttcag tatgtcttaa tcgcagctgt gattggaaca attcagattg 240
ctgtcatctg tgtggtggtc ctctgcatca caagggccaa actttaggta atagcattgg 300
actgagattt gtaaactttc caaccttcca ggaaatgccc cagaagcaac agaattcaca 360
gacagaagca aaatacaggg cactacagtt cagacaatac aacaagagcg tccacgaggt 420
taatctaaag ggagcatgtt tcacagtggc tggactaccg agagcttgga ctacacaata 480
cagtattata gacaaaagaa taagacaaga gatctacaca tgttgccttg catttgtggt 540
aatctacacc aatgaaaaca tgtactacag ctatatttga ttatgtatgg atatatttga 600
aatagtatac attgtcttga tgttttttct g                                631
```

<210> 447
<211> 585
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(585)
<223> n = A,T,C or G

<400> 447
```
ccttgggaaa antntcacaa tataaagggt cgtagacttt actccaaatt ccaaaaaggt 60
cctggccatg taatcctgaa agtttttccca aggtagctat aaaatcctta taagggtgca 120
gcctcttctg gaattcctct gatttcaaag tctcactctc aagttcttga aaacgagggc 180
agttcctgaa aggcaggtat agcaactgat cttcagaaag aggaactgtg tgcaccggga 240
tgggctgcca gagtaggata ggattccaga tgctgacacc ttctggggga aacagggctg 300
ccaggtttgt catagcactc atcaaagtcc ggtcaacgtc tgtgcttcga atataaacct 360
gttcatgttt ataggactca ttcaagaatt ttctatatct ctttcttata tactctccaa 420
gttcataatg ctgctccatg cccagctggg tgagttggcc aaatccttgt ggccatgagg 480
attcctttat ggggtcagtg ggaaaggtgt caatgggact tcggtctcca tgccgaaaca 540
ccaaagtcac aaacttcaac tccttggcta gtacacttcg gtcta                585
```

<210> 448
<211> 93
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(93)
<223> n = A,T,C or G

<400> 448
```
tgctcgtggg tcattctgan nnccgaactg accntgccag ccctgccgan gggccnccat 60
ggctccctag tgccctggag aggangggggc tag                             93
```

```
<210> 449
<211> 706
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(706)
<223> n = A,T,C or G

<400> 449
ccaagttcat gctntgtgct ggacgctgga cagggggcaa aagcnnttgc tcgtgggtca 60
ttctgancac cgaactgacc atgccagccc tgccgatggt cctccatggc tccctagtgc 120
cctggagagg aggtgtctag tcagagagta gtcctggaag gtggcctctg ngaggagcca 180
cggggacagc atcctgcaga tggtcgggcg cgtcccattc gccattcagg ctgcgcaact 240
gttgggaagg gcgatcggtg cgggcctctt cgctattacg ccagctggcg aaaggggat 300
gtgctgcaag gcgattaagt tgggtaacgc cagggttttc ccagtcncga cgttgtaaaa 360
cgacggccag tgaattgaat ttaggtgacn ctatagaaga gctatgacgt cgcatgcacg 420
cgtacgtaag cttggatcct ctagagcggc cgcctactac tactaaattc gcggccgcgt 480
cgacgtggga tccncactga gagagtggag agtgacatgt gctggacnct gtccatgaag 540
cactgagcag aagctggagg cacaacgcnc cagacactca cagctactca ggaggctgag 600
aacaggttga acctgggagg tggaggttgc aatgagctga gatcaggccn ctgcnccccca 660
gcatggatga cagagtgaaa ctccatctta aaaaaaaaaa aaaaaa       706

<210> 450
<211> 493
<212> DNA
<213> Homo sapiens

<400> 450
gagacggagt gtcactctgt tgcccaggct ggagtgcagc aagacactgt ctaagaaaaa 60
acagttttaa aaggtaaaac aacataaaaa gaaatatcct atagtggaaa taagagagtc 120
aaatgaggct gagaacttta caaagggatc ttacagacat gtcgccaata tcactgcatg 180
agcctaagta taagaacaac ctttggggag aaaccatcat ttgacagtga ggtacaattc 240
caagtcaggt agtgaaatgg gtggaattaa actcaaatta atcctgccag ctgaaacgca 300
agagacactg tcagagagtt aaaaagtgag ttctatccat gaggtgattc cacagtcttc 360
tcaagtcaac acatctgtga actcacagac caagttctta aaccactgtt caaactctgc 420
tacacatcag aatcacctgg agagctttac aaactcccat tgccgagggt cgacgcggcc 480
gcgaatttag tag                                          493

<210> 451
<211> 501
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(501)
<223> n = A,T,C or G

<400> 451
gggcgcgtcc cattcgccat tcaggctgcg caactgttgg gaaggcgat cggtgcgggc 60
ctcttcgcta ttacgccagc tggcgaaagg gggatgtgct gcaaggcgat taagttgggt 120
aacgccaggg ttttcccagt cncgacgttg taaaacgacg gccagtgaat tgaatttagg 180
tgacnctata gaagagctat gacgtcgcat gcacgcgtac gtaagcttgg atcctctaga 240
gcggccgcct actactacta aattcgcggc cgcgtcgacg tgggatccnc actgagagag 300
tggagagtga catgtgctgg acnctgtcca tgaagcactg agcagaagct ggaggcacaa 360
cgcnccagac actcacagct actcaggagg ctgagaacag gttgaacctg ggaggtggag 420
```

```
gttgcaatga gctgagatca ggccnctgcn ccccagcatg gatgacagag tgaaactcca 480
tcttaaaaaa aaaaaaaaa a                                               501
```

```
<210> 452
<211> 51
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(51)
<223> n = A,T,C or G

<400> 452
agacggtttc accnttacaa cnccttttag gatgggnntt ggggagcaag c            51
```

```
<210> 453
<211> 317
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(317)
<223> n = A,T,C or G

<400> 453
tacatcttgc tttttcccca ttggaactag tcattaaccc atctctgaac tggtagaaaa 60
acatctgaag agctagtcta tcagcatctg gcaagtgaat tggatggttc tcagaaccat 120
ttcacccana cagcctgttt ctatcctgtt taataaatta gtttgggttc tctacatgca 180
taacaaaccc tgctccaatc tgtcacataa aagtctgtga cttgaagttt antcagcacc 240
cccaccaaac tttatttttc tatgtgtttt ttgcaacata tgagtgtttt gaaaataagg 300
tacccatgtc tttatta                                                 317
```

```
<210> 454
<211> 231
<212> DNA
<213> Homo sapiens

<400> 454
ttcgaggtac aatcaactct cagagtgtag tttccttcta tagatgagtc agcattaata 60
taagccacgc cacgctcttg aaggagtctt gaattctcct ctgctcactc agtagaacca 120
agaagaccaa attcttctgc atcccagctt gcaaacaaaa ttgttcttct aggtctccac 180
ccttcctttt tcagtgttcc aaagctcctc acaatttcat gaacaacagc t           231
```

```
<210> 455
<211> 231
<212> DNA
<213> Homo sapiens

<400> 455
taccaaagag ggcataataa tcagtctcac agtagggttc accatcctcc aagtgaaaaa 60
cattgttccg aatgggcttt ccacaggcta cacacacaaa acaggaaaca tgccaagttt 120
gtttcaacgc attgatgact tctccaagga tcttcctttg gcatcgacca cattcagggg 180
caaagaattt ctcatagcac agctcacaat acagggctcc tttctcctct a           231
```

```
<210> 456
<211> 231
```

<212> DNA
<213> Homo sapiens

<400> 456
ttggcaggta cccttacaaa gaagacacca taccttatgc gttattaggt ggaataatca 60
ttccattcag tattatcgtt attattcttg gagaaaccct gtctgtttac tgtaaccttt 120
tgcactcaaa ttcctttatc aggaataact acatagccac tatttacaaa gccattggaa 180
ccttttattt tggtgcagct gctagtcagt ccctgactga cattgccaag t   231

<210> 457
<211> 231
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(231)
<223> n = A,T,C or G

<400> 457
cgaggtaccc aggggtctga aaatctctnn tttantagtc gatagcaaaa ttgttcatca 60
gcattcctta atatgatctt gctataatta gatttttctc cattagagtt catacagttt 120
tatttgattt tattagcaat ctctttcaga agacccttga gatcattaag ctttgtatcc 180
agttgtctaa atcgatgcct catttcctct gaggtgtcgc tggcttttgt g   231

<210> 458
<211> 231
<212> DNA
<213> Homo sapiens

<400> 458
aggtctggtt ccccccactt ccactcccct ctactctctc taggactggg ctgggccaag 60
agaagagggg tggttaggga agccgttgag acctgaagcc ccaccctcta ccttccttca 120
acaccctaac cttgggtaac agcatttgga attatcattt gggatgagta gaatttccaa 180
ggtcctgggt taggcatttt ggggggccag accccaggag aagaagattc t   231

<210> 459
<211> 231
<212> DNA
<213> Homo sapiens

<400> 459
ggtaccgagg ctcgctgaca cagagaaacc ccaacgcgag gaaaggaatg gccagccaca 60
ccttcgcgaa acctgtggtg gcccaccagt cctaacggga caggacagag agacagagca 120
gccctgcact gtttttccctc caccacagcc atcctgtccc tcattggctc tgtgctttcc 180
actatacaca gtcaccgtcc caatgagaaa caagaaggag caccctccac a   231

<210> 460
<211> 231
<212> DNA
<213> Homo sapiens

<400> 460
gcaggtataa catgctgcaa caacagatgt gactaggaac ggccggtgac atggggaggg 60
cctatcaccc tattcttggg ggctgcttct tcacagtgat catgaagcct agcagcaaat 120
cccacctccc cacacgcaca cggccagcct ggagcccaca gaagggtcct cctgcagcca 180
gtggagcttg gtccagcctc cagtccaccc ctaccaggct taaggataga a   231

```
<210> 461
<211> 231
<212> DNA
<213> Homo sapiens

<400> 461
cgaggtttga gaagctctaa tgtgcagggg agccgagaag caggcggcct agggagggtc 60
gcgtgtgctc cagaagagtg tgtgcatgcc agaggggaaa caggcgcctg tgtgtcctgg 120
gtggggttca gtgaggagtg ggaaattggt tcagcagaac caagccgttg ggtgaataag 180
aggggggattc catggcactg atagagccct atagtttcag agctgggaat t        231


<210> 462
<211> 231
<212> DNA
<213> Homo sapiens

<400> 462
aggtaccctc attgtagcca tgggaaaatt gatgttcagt ggggatcagt gaattaaatg 60
gggtcatgca agtataaaaa ttaaaaaaaa aagacttcat gcccaatctc atatgatgtg 120
gaagaactgt tagagagacc aacagggtag tgggttagag atttccagag tcttacattt 180
tctagaggag gtatttaatt tcttctcact catccagtgt tgtatttagg a        231


<210> 463
<211> 231
<212> DNA
<213> Homo sapiens

<400> 463
tactccagcc tggtgacaga gcgagaccct atcaccgccc cccaccccac caaaaaaaaa 60
actgagtaga caggtgtcct cttggcatgg taagtcttaa gtcccctccc agatctgtga 120
catttgacag gtgtcttttc ctctggacct cggtgtcccc atctgagtga gaaaaggcag 180
tggggaggtg gatcttccag tcgaagcggt atagaagccc gtgtgaaaag c        231


<210> 464
<211> 231
<212> DNA
<213> Homo sapiens

<400> 464
gtactctaag attttatcta agttgccttt tctgggtggg aaagtttaac cttagtgact 60
aaggacatca catatgaaga atgtttaagt tggaggtggc aacgtgaatt gcaaacaggg 120
cctgcttcag tgactgtgtg cctgtagtcc cagctactcg ggagtctgtg tgaggccagg 180
ggtgccagcg caccagctag atgctctgta acttctaggc cccattttcc c        231


<210> 465
<211> 231
<212> DNA
<213> Homo sapiens

<400> 465
catgttgttg tagctgtggt aatgctggct gcatctcaga cagggttaac ttcagctcct 60
gtggcaaatt agcaacaaat tctgacatca tatttatggt ttctgtatct ttgttgatga 120
aggatggcac aattttttgct tgtgttcata atatactcag attagttcag ctccatcaga 180
taaactggag acatgcagga cattagggta gtgttgtagc tctggtaatg a        231


<210> 466
<211> 231
<212> DNA
```

```
<213> Homo sapiens

<400> 466
caggtacctc tttccattgg atactgtgct agcaagcatg ctctccgggg tttttttaat 60
ggccttcgaa cagaacttgc cacataccca ggtataatag tttctaacat ttgcccagga 120
cctgtgcaat caaatattgt ggagaattcc ctagctggag aagtcacaaa gactataggc 180
aataatggag accagtccca caagatgaca accagtcgtt gtgtgcggct g           231

<210> 467
<211> 311
<212> DNA
<213> Homo sapiens

<400> 467
gtacaccctg gcacagtcca atctgaactg gttcggcact catctttcat gagatggatg 60
tggtggcttt tctccttttt catcaagact cctcagcagg gagcccagac cagcctgcac 120
tgtgccttaa cagaaggtct tgagattcta agtgggaatc atttcagtga ctgtcatgtg 180
gcatgggtct ctgcccaagc tcgtaatgag actatagcaa ggcggctgtg ggacgtcagt 240
tgtgacctgc tgggcctccc aatagactaa caggcagtgc cagttggacc caagagaaga 300
ctgcagcaga c                                                       311

<210> 468
<211> 3112
<212> DNA
<213> Homo sapiens

<400> 468
cattgtgttg ggagaaaaac agaggggaga tttgtgtggc tgcagccgag ggagaccagg 60
aagatctgca tggtgggaag gacctgatga tacagagttt gataggagac aattaaaggc 120
tggaaggcac tggatgcctg atgatgaagt ggactttcaa actggggcac tactgaaacg 180
atgggatggc cagagacaca ggagatgagt tggagcaagc tcaataacaa agtggttcaa 240
cgaggacttg gaattgcatg gagctggagc tgaagtttag cccaattgtt tactagttga 300
gtgaatgtgg atgattggat gatcatttct catctctgag cctcaggttc cccatccata 360
aaatgggata cacagtatga tctataaagt gggatatagt atgatctact tcactggtt 420
atttgaagga tgaattgaga taªtttattt caggtgccta gaacaatgcc cagattagta 480
catttggtgg aactgagaaa tggcataaca ccaaatttaa tatatgtcag atgttactat 540
gattatcatt caatctcata gttttgtcat ggcccaattt atcctcactt gtgcctcaac 600
aaattgaact gttaacaaag gaatctctgg tcctgggtaa tggctgagca ccactgagca 660
tttccattcc agttggcttc ttgggtttgc tagctgcatc actagtcatc ttaaataaat 720
gaagttttaa catttctcca gtgatttttt tatctcacct ttgaagatac tatgttatgt 780
gattaaataa agaacttgag aagaacaggt ttcattaaac ataaaatcaa tgtagacgca 840
aattttctgg atgggcaata cttatgttca caggaaatgc tttaaaatat gcagaagata 900
attaaatggc aatggacaaa gtgaaaaact tagacttttt ttttttttt ggaagtatct 960
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tttagctctc aaaatggttc attttaagag aaagttttag aatctcatat ttattcctgt 1260
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aacatcacta gaaacagcaa gatgacaata taatgtctaa gtagtgacat gtttttgcac 1440
atttccagcc cctttaaata tccacacaca caggaagcac aaaaggaagc acagagatcc 1500
ctgggagaaa tgcccggccg ccatcttggg tcatcgatga gcctcgccct gtgcctggtc 1560
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aaaacagatc ctgttgtgga tatttatttg aacgggatta cagatttgaa atgaagtcac 1680
aaagtgagca ttaccaatga gaggaaaaca gacgagaaaa tcttgatggc ttcacaagac 1740
atgcaacaaa caaaatggaa tactgtgatg acatgaggca gccaagctgg ggaggagata 1800
accacggggc agagggtcag gattctggcc ctgctgccta aactgtgcgt tcataaccaa 1860
```

```
atcatttcat atttctaacc ctcaaaacaa agctgttgta atatctgatc tctacggttc 1920
cttctgggcc caacattctc catatatcca gccacactca tttttaatat ttagttccca 1980
gatctgtact gtgacctttc tacactgtag aataacatta ctcattttgt tcaaagaccc 2040
ttcgtgttgc tgcctaatat gtagctgact gtttttccta aggagtgttc tggcccaggg 2100
gatctgtgaa caggctggga agcatctcaa gatctttcca gggttatact tactagcaca 2160
cagcatgatc attacggagt gaattatcta atcaacatca tcctcagtgt ctttgcccat 2220
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aacctcatag tatcttatat aatatacttc atttctctat ctctatcaca atatccaaca 2880
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tgagtgcgct ttagaatttt ggcaaatcat actggtcact tatctcaact ttgagatgtg 3000
tttgtccttg tagttaattg aaagaaatag ggcactcttg tgagccactt tagggttcac 3060
tcctggcaat aaagaattta caaagagcaa aaaaaaaaaa aaaaaaaaa aa            3112
```

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<210> 469
<211> 2229
<212> DNA
<213> Homo sapiens
```

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<400> 469
agctctttgt aaattctttta ttgccaggag tgaaccctaa agtggctcac aagagtgccc 60
tatttctttc aattaactac aaggacaaac acatctcaaa gttgagataa gtgaccagta 120
tgatttgcca aaattctaaa gcgcactcac catgaaatgg ataaaggtta cctttgggga 180
tttgcactgc atgaattctg tgaaaagctt gttggatatt gtgatagaga tagagaaatg 240
aagtatatta tataagatac tatgaggttc cctgcctttg cttcacatcc caggcttaca 300
aacgtgcccc ataaacattc cctctgtggc tcttgcattt catatatttta tctaaactct 360
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ccttctttgc atgaagtaag atagtcaact tattcaaaac tttacatcat tctagattta 480
agagacaagg aagagcttct caggcagaag gaataatgta tgcctgacat gttcaaggaa 540
ttacaagtta gattttgttt aggtgcatgg gaggggttga tggtgatgac agataaggct 600
ggagggatgg ggagaggctg tggctgtata cagcctcagt acaaggctaa gcattttaac 660
tttatactgg aaaaaaaatc aaacaaaggg gagggataaa ggacttagtc atctttgcac 720
tggaaaacaa aatatgtaat taaattccca tagctgcatg taacattgaa ttcttccagg 780
ttaaaaaaaa agttaatcct gtgatattaa tggaatgaca ttttgaggtc ttgagaatgg 840
gcacaaaagt gggaaatgaa tttcagtatg ggcaaagaca ctgaggatga tgttgattag 900
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agatgcttcc cagcctgttc acagatcccc tgggccagaa cactccttag gaaaaacagt 1020
cagctacata ttaggcagca acacgaaggg tctttgaaca aaatgagtaa tgttattcta 1080
cagtgtagaa aggtcacagt acagatctgg gaactaaata ttaaaaatga gtgtggctgg 1140
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cacagtattc cattttgttt gttgcatgtc ttgtgaagcc atcaagattt tctcgtctgt 1380
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tgtcatcttg ctgtttctag tgatgttaat tatctccatt tcagcagatg tgtggcctca 1740
gatggtaaag tcagcagcct ttcttatttc tcacctggaa atacatacga ccatttgagg 1800
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agacaaatgg caaggtgtca gcataccctg aacttgagtt gagagctaca cacaatatta 1860
ttggtttccg agcatcacaa acaccctctc tgtttcttca ctgggcacag aatttttaata 1920
cttatttcag tgggctgttg gcaggaacaa atgaagcaat ctacataaag tcactagtgc 1980
agtgcctgac acacaccatt ctcttgaggt cccctctaga gatcccacag gtcatatgac 2040
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ggtcacctga ggtcaggagt tcaagaccag cctggccaat atggtgaaac cccatctcta 2160
ctaaaaatac aaaaattagc tgggcgtgct ggtgcatgcc tgtaatccca gccccaacac 2220
aatggaatt                                                           2229
```

<210> 470
<211> 2426
<212> DNA
<213> Homo sapiens

<400> 470
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160

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<213> Homo sapiens

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<211> 515
<212> DNA
<213> Homo sapiens

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<222> (1)...(515)
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<210> 473
<211> 5829
<212> DNA
<213> Homo sapiens

<400> 473
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<211> 1594
<212> DNA
<213> Homo sapiens

<400> 474
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<212> DNA
<213> Homo sapiens

<220>
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<222> (33)
<223> n=A,T,C or G

<400> 475
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tcctcctcca tccaggacct gaggggtgtc ctttctgcg cttccttgga tggcagtctt 2340
tcccttcatg tttatagtra cttaccatta aatcactgtg ccgttttttc ctaaaataaa 2400
aaaaaaaaaa aaaa                                                   2414
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164

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<210> 476
<211> 3434
<212> DNA
<213> Homo sapiens

<400> 476
ctgtgctgca aatggggcca tatagaggaa aggagcagct ggctctggag catggtgtgc 60
actccctttg ggccttcagt ccatgtctca tgggtcgtat gacactgcgg gcttgttggt 120
tgccaagagg cagaccacag gtcatcttga ggaggacttt atgttccagt ccagaaagca 180
gccagtggta ccacccaggg gacttgtgct tctgtggccc aggccagacg tagaatttga 240
caaagtcagg acggtctcag tcagagcagc atgtcggtcc ccggggcctg tgcatgccgg 300
gcaggccag gctggcttaa ggagcaagca gccacctctg ttaggggtgt gcctggagca 360
ggtggagcag ccaccaacct cacgcactga aagaagcagg gatggccagg ttccaacatc 420
ctgagtggct gccacctgat ggctgatgga gcagaggcct gaggaaaagc agatggcact 480
gctttgtagt gctgttcttt gtctctcttg atctttttca gttaatgtct gttttatcag 540
agactaggat tgcaaaccct gctctttttt gctttccatt tgcttggtaa atattcctcc 600
atccctttat tttaagccta tgtgtgtctt tgcacatgag atgggtctcc tgaatacagg 660
acaacaatgg gtctttactc tttatccaac ttgccagtct gtgtctttta actggggcat 720
ttagcccatt tacatttaag tttagtattt gttacatgtg aaatttatcc tgtcatgatg 780
ttgctagctt tttattttc ccattagttt gcagtttctt tatagtgtca atggtcttta 840
caattcgata tgtttttgta gtggctggta ctggtttttc ctttctacgt ttagtgtctc 900
cttcaggagc tcttgtaaca caagaatgtg gatttatttc ttgtaaggta aatatgtgga 960
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gtggtttgat cataattcac cacagccctg aactcttgag tccaagccat ccttttgcct 1200
taatctccca accagttgga tctacaagca taaggcatca tgcgtggcta atttttttcac 1260
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gggcgtgatg atgagagaag ggggtttgaa acttctaat aagagttaac ttagagccat 1560
ttaagaaagg aaaaaacaca aattatcaga aaaacaacag taagatcaag tgcaaaagtt 1620
ctgtggcaaa gatgatgaga gtaaagaata tatgtttgtg actcatggtg gcttttactt 1680
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tacttcatta tcaagctata ttattttatt aatgtagttc gatgatctta cagcaaagct 1860.
gaaagctgta tcttcaaaat atgtctattt gactaaaaag ttattcaaca ggagttatta 1920
tctataaaaa aatacaacag gaatataaaa aacttgagga taaaaagatg ttggaaaaag 1980
taatattaaa tcttaaaaaa catatggaaa ctacacaatg gtgaagacac attggtgaag 2040
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tatttcactg caaattatat tttggatatg tatatatatt gtgcttcctc tgcctgtctt 2220
acagcaattt gccttgcaga gttctaggaa aaaggtggca tgtgtttta ctttcaaaat 2280
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gaagaaaacc taggaaatat tcgtctggac attgcacttg gcaatgaatt tatgggcgct 2460
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aacttttata ctgatacaca gacactaaaa agggaaaggg tttagatgag aagctctgct 2640
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gaggttatgg agtctgtagc ttcaggtaag atacttaaaa cccttcagag tttctccatt 2760
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tgtagataat gtaatttatg tatcattaat gcctctttag tagtttagag aaaacgtcaa 3000
aagaaatggc cccagaataa gcttcttgat ttgtaaaatt ctatgtcatt ggctcaaatt 3060
```

```
tgtatagtat ctcaaaatat aaatatatag acatctcaga taatatattt gaaatagcaa 3120
attcctgtta gaaaataata gtacttaact agatgagaat aacaggtcgc cattatttga 3180
attgtctcct attcgttttt catttgttgt gttactcatg ttttacttat ggggggatat 3240
atataacttc cgctgttttc agaagtattg tatgcagtca gtatgagaat gcaatttaag 3300
tttccttgat gctttttcac acttctatta ctagaaataa gaatacagta atattggcaa 3360
agaaaattga ccagttcaat aaaattttt  agtaaatctg attgaaaata aaaaaaaaaa 3420
aaaaaaaaaa aaaa                                                   3434
```

<210> 477
<211> 140
<212> PRT
<213> Homo sapiens

<400> 477
Met Asp Gly His Thr Asp Ile Trp Arg Asn His Met Asp Thr Pro Pro
                  5   10   15

His Tyr His Arg Asp Thr Asp Thr Arg Arg His His His Met Asp Thr
            20   25   30

Leu Ser His Tyr His Arg Asp Thr Arg His His Thr Val Thr Trp Thr
        35   40   45

His His His Thr His Glu His Thr Asp Thr Leu Pro Tyr Gly His Trp
    50   55   60

His Thr His Cys His Thr Val Thr Trp Thr His Leu His Thr Ile Thr
65   70   75   80

Pro Pro His Thr Leu Pro Val Asp Thr Arg Thr His Arg His Cys His
                85   90   95

Thr Asp Thr Gln Asn Thr Val Thr Arg Arg His His His Ala Asp Thr
            100   105   110

Pro Pro Leu Trp Cys Arg Leu Asn Tyr Pro Ala Gly Gly Thr Ala Val
        115   120   125

Ala Tyr Ser Cys Leu Ser Asp Trp Leu Ser Pro Gln
    130   135   140

<210> 478
<211> 143
<212> PRT
<213> Homo sapiens

<400> 478
Met Tyr Arg His Thr Glu Thr Leu Pro His Gly Asp Thr Val Thr Gln
                  5   10   15

Ser His Gly His Thr Gly Ile Val Thr Trp Thr Asp Thr Gln Thr Tyr
            20   25   30

Gly Glu Ile Thr Trp Thr His His His Thr Ile Thr Gly Thr Gln Thr
        35   40   45

His Gly Asp Ile Thr Thr Trp Thr His Cys His Thr Thr Thr Gly Thr

```
          50                    55                    60
Arg Asp Ile Thr Leu Ser His Gly His Thr Ile Thr His Met Asn Thr
65                    70                    75                    80

Pro Thr His Cys His Met Asp Thr Gly Thr His Thr Ala Thr Leu Ser
                   85                    90                    95

His Gly His Thr Ser Thr Pro Ser His His His Thr His Cys Leu Trp
                  100                   105                   110

Thr Gln Gly His Thr Asp Thr Val Thr Gln Ile His Lys Thr Leu Ser
                  115                   120                   125

His Gly Asp Ile Thr Met Gln Ile His His His Ser Gly Ala Val
                  130                   135                   140


<210> 479
<211> 222
<212> PRT
<213> Homo sapiens

<400> 479
Met Tyr Arg His Thr Glu Thr Leu Pro His Gly Asp Thr Val Thr Gln
                    5                    10                    15

Ser His Glu His Thr Gly Ile Val Thr Trp Thr Asp Thr Gln Thr Tyr
                   20                    25                    30

Gly Glu Ile Thr Leu Thr His His His Thr Ile Thr Gly Thr Gln Thr
                   35                    40                    45

His Gly Asp Ile Thr Thr Trp Thr His Cys His Thr Thr Thr Gly Thr
                   50                    55                    60

Arg Asp Ile Thr Leu Ser His Gly His Thr Ile Thr His Met Asn Thr
65                    70                    75                    80

Pro Thr His Cys His Met Asp Thr Ala Thr His Thr Ala Thr Leu Ser
                   85                    90                    95

His Gly His Thr Ser Ile Pro Ser His His His Thr His Cys His Val
                  100                   105                   110

Asp Thr Arg Thr His Arg His Cys His Thr Asp Thr Gln Asn Thr Val
                  115                   120                   125

Thr Arg Arg His His His Ala Asp Thr Pro Pro His Gly His Ser Thr
                  130                   135                   140

Arg His Ser Ala Thr Gln Ile His His His Thr Glu Met Arg Thr His
145                   150                   155                   160

Cys His Thr Asp Thr Thr Thr Ser Leu Pro His Phe His Val Ser Ala
                  165                   170                   175

Gly Gly Val Gly Pro Thr Thr Leu Gly Ser Asn Arg Glu Ile Thr Trp
```

```
                 180                  185                  190
Thr Tyr Ser Glu Gly Lys Ile Phe Phe Tyr Phe Leu Gly Asn Gln Ala
        195                  200                  205

Arg Leu Cys Leu Lys Lys Arg Lys Lys Lys Gln Tyr Thr Val
        210                  215                  220
```

<210> 480
<211> 144
<212> PRT
<213> Homo sapiens

<400> 480
```
Met Glu Pro Tyr Arg Gly Asn Glu Gln Pro Ser Gln Glu Gln Gly Val
                 5                  10                  15

Cys Cys Leu Trp Gly Leu Gln Ser Leu Pro Gln Gly Ser Tyr Val Thr
                20                  25                  30

Val Gly Phe Leu Val Val Lys Arg Gln Thr Ile Gly Arg Leu Glu Arg
            35                  40                  45

Asp Phe Met Phe Lys Cys Arg Lys Gln Pro Gly Leu Pro Pro Ser Gly
        50                  55                  60

Leu Cys Leu Leu Trp Pro Trp Pro Asn Leu Glu Phe Gly Arg Arg Gln
65                  70                  75                  80

Asp Arg Leu Thr Trp Ser Ser Val Ser Val Ala Gly Val Cys Ala Cys
                85                  90                  95

Arg Ala Arg Pro Gly Trp Leu Gly Glu Gln Pro Ala Thr Ser Ala Gly
            100                 105                 110

Val Arg Leu Glu Gln Val Glu Gln Pro Pro Ala His Pro Leu Gln Glu
        115                 120                 125

Ala Gly Val Ala Arg Phe Pro Arg Pro Glu Trp Val Pro Pro Asn Gly
    130                 135                 140
```

<210> 481
<211> 167
<212> PRT
<213> Homo sapiens

<400> 481
```
Met His Gly Pro Gln Val Leu Ala Arg Cys Ser Glu Cys Ala Cys Pro
                 5                  10                  15

Ala Leu Ala Ala Thr Ser Ala Gly Val Arg Leu Glu Gly Val Asp Arg
            20                  25                  30
```

```
Pro Pro Thr Leu Pro Ser Gln Gly Ser Gly Trp Pro Cys Ser His Ser
        35              40              45

Leu Ser Gly Cys His Leu Met Ala Asp Gly Ala Lys Ala Leu Gly Lys
    50              55              60

Ala Asp Gly Pro Trp Pro Tyr Leu Phe Val Arg Arg Thr Asp Val Pro
65              70              75              80

Cys Pro Ala Ala Ser Glu Val Gly Gly Cys Ala Pro Ser Ser Trp Arg
            85              90              95

Ala Leu Ala Glu Val Thr Gly Cys Ser Leu Gly Pro Leu Gly Leu Ala
        100             105             110

Gln His Ala Gln Ala Ser Val Leu Leu Leu Cys Tyr Lys Trp Ser His
        115             120             125

Ile Gly Glu Thr Ser Ser His Leu Arg Ser Lys Val Tyr Ala Ala Phe
    130             135             140

Gly Gly Ser Ser Pro Cys Leu Lys Gly Leu Met Ser Leu Trp Ala Ser
145             150             155             160

Trp Leu Ser Arg Gly Arg Pro
                165


<210> 482
<211> 143
<212> PRT
<213> Homo sapiens

<400> 482
Met Glu Pro Tyr Arg Gly Asn Lys Lys Gln Val Gln Glu Lys Gly Val
                5               10              15

Pro Cys Leu Trp Gly Ser Ser Pro Cys Leu Arg Cys His Met Ala Leu
            20              25              30

Arg Ala Ser Trp Leu Pro Gly Gly Gly Pro Gln Ala Ile Leu Gly Arg
        35              40              45

Thr Leu Cys Ser Ser Ala Glu Ser Ser Gln Asp Cys His Pro Gly Gly
    50              55              60

Pro Ser Ile Ala Leu Ala Lys Pro Cys Arg Gly Val Trp Leu Leu Phe
65              70              75              80

Glu Pro Ala Trp Pro Pro Trp His Ala Arg Ala Pro Gly Ala Gly Thr
            85              90              95

Leu Leu Arg Val Cys Leu Ser Cys Leu Gly Cys His Leu Cys Gly Gly
            100             105             110

Ala Ser Gly Gly Gly Gly Pro Ala Thr Asn Leu Thr Gln Ser Arg Lys
    115             120             125
```

```
Trp Met Ala Met Phe Pro Gln Pro Glu Trp Leu Pro Pro Asp Gly
    130             135             140
```

```
<210> 483
<211> 143
<212> PRT
<213> Homo sapiens
```

```
<400> 483
Met Glu Thr Gln Arg Gly Asn Lys Gln Arg Ala Gln Glu Gln Gly Val
                5                10                15


Cys Cys Leu Trp Gly Ser Ser Pro Cys Leu Gly Ser Tyr Gly Thr Ala
            20                25                30


Gly Phe Leu Val Ala Lys Arg Arg Thr Thr Gly Leu Leu Glu Glu Asp
        35                40                45


Phe Thr Phe Lys Cys Arg Lys Gln Pro Lys Leu Pro Ser Met Arg Leu
    50                55                60


Ser Leu Leu Trp Pro Trp Arg Asp Leu Lys Phe Val Pro Arg Gln Asp
 65                70                75                80


Lys Leu Thr Arg Ser Ser Val Ser Val Ala Gly Ala Tyr Ala Cys Arg
                85                90                95


Ala Gly Pro Gly Trp Leu Lys Glu Gln Pro Ala Thr Ser Ala Arg Val
            100               105               110


Arg Leu Val Gln Ala Glu His Pro Pro Pro His Pro Leu Glu Glu Val
        115               120               125


Gly Met Ala Arg Phe Pro Gln Pro Glu Cys Leu Pro Pro Tyr Cys
    130               135               140
```

```
<210> 484
<211> 30
<212> PRT
<213> Homo Sapien
```

```
<400> 484
Thr Ala Ala Ser Asp Asn Phe Gln Leu Ser Gln Gly Gly Gln Gly Phe
 1               5                 10                15
Ala Ile Pro Ile Gly Gln Ala Met Ala Ile Ala Gly Gln Ile
            20                25                30
```

```
<210> 485
<211> 31
<212> DNA
<213> Artificial Sequence

<220>
<223> Made in a lab

<400> 485
gggaagctta tcacctatgt gccgcctctg c                              31
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170

```
<210> 486
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Made in a lab

<400> 486
gcgaattctc acgctgagta .tttggcc                                       27

<210> 487
<211> 36
<212> DNA
<213> Artificial Sequence

<220>
<223> Made in a lab

<400> 487
cccgaattct tagctgccca tccgaacgcc ttcatc                             36

<210> 488
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Made in a lab

<400> 488
gggaagcttc ttccccggct gcaccagctg tgc                                33

<210> 489
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<223> Made in a lab

<400> 489
Met Asp Arg Leu Val Gln Arg Phe Gly Thr Arg Ala Val Tyr Leu Ala
1               5                   10                  15
Ser Val Ala

<210> 490
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Made in a lab

<400> 490
Tyr Leu Ala Ser Val Ala Ala Phe Pro Val Ala Ala Gly Ala Thr Cys
```

171

```
   1               5               10              15
Leu Ser His Ser
           20


       <210> 491
       <211> 20
       <212> PRT
       <213> Artificial Sequence

       <220>
       <223> Made in a lab

       <400> 491
Thr Cys Leu Ser His Ser Val Ala Val Val Thr Ala Ser Ala Ala Leu
   1               5               10              15
Thr Gly Phe Thr
           20


       <210> 492
       <211> 20
       <212> PRT
       <213> Artificial Sequence

       <220>
       <223> Made in a lab

       <400> 492
Ala Leu Thr Gly Phe Thr Phe Ser Ala Leu Gln Ile Leu Pro Tyr Thr
   1               5               10              15
Leu Ala Ser Leu
           20


       <210> 493
       <211> 20
       <212> PRT
       <213> Artificial Sequence

       <220>
       <223> Made in a lab

       <400> 493
Tyr Thr Leu Ala Ser Leu Tyr His Arg Glu Lys Gln Val Phe Leu Pro
   1               5               10              15
Lys Tyr Arg Gly
           20


       <210> 494
       <211> 20
       <212> PRT
       <213> Artificial Sequence

       <220>
       <223> Made in a lab

       <400> 494
Leu Pro Lys Tyr Arg Gly Asp Thr Gly Gly Ala Ser Ser Glu Asp Ser
   1               5               10              15
Leu Met Ile Ser
```

20

```
<210> 495
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Made in a lab


<400> 495
Asp Ser Leu Met Thr Ser Phe Leu Pro Gly Pro Lys Pro Gly Ala Pro
1               5                   10                  15
Phe Pro Asn Gly
            20


<210> 496
<211> 21
<212> PRT
<213> Artificial Sequence

<220>
<223> Made in a lab


<400> 496
Ala Pro Phe Pro Asn Gly His Val Gly Ala Gly Gly Ser Gly Leu Leu
1               5                   10                  15
Pro Pro Pro Pro Ala
            20


<210> 497
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Made in a lab


<400> 497
Leu Leu Pro Pro Pro Pro Ala Leu Cys Gly Ala Ser Ala Cys Asp Val
1               5                   10                  15
Ser Val Arg Val
            20


<210> 498
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Made in a lab


<400> 498
Asp Val Ser Val Arg Val Val Val Gly Glu Pro Thr Glu Ala Arg Val
1               5                   10                  15
Val Pro Gly Arg
            20
```

```
          <210> 499
          <211> 20
          <212> PRT
          <213> Artificial Sequence

          <220>
          <223> Made in a lab

          <400> 499
Arg Val Val Pro Gly Arg Gly Ile Cys Leu Asp Leu Ala Ile Leu Asp
 1               5                  10                  15
Ser Ala Phe Leu
          20


          <210> 500
          <211> 20
          <212> PRT
          <213> Artificial Sequence

          <220>
          <223> Made in a lab

          <400> 500
Leu Asp Ser Ala Phe Leu Leu Ser Gln Val Ala Pro Ser Leu Phe Met
 1               5                  10                  15
Gly Ser Ile Val
          20


          <210> 501
          <211> 20
          <212> PRT
          <213> Artificial Sequence

          <220>
          <223> Made in a lab

          <400> 501
Phe Met Gly Ser Ile Val Gln Leu Ser Gln Ser Val Thr Ala Tyr Met
 1               5                  10                  15
Val Ser Ala Ala
          20


          <210> 502
          <211> 414
          <212> DNA
          <213> Homo Sapien

          <220>
          <221> misc_feature
          <222> (1)...(414)
          <223> n=A,T,C or G

          <400> 502
caccatggag acaggcctgc gctggctttt cctggtcgct gtgctcaaag gtgtccaatg     60
tcagtcggtg gaggagtccg ggggtcgcct ggtcacgcct gggacacctt tgacantcac    120
ctgtagagtt tttggaatng acctcagtag caatgcaatg agctgggtcc gccaggctcc    180
agggaagggg ctggaatgga tcggagccat tgataattgt ccacantacg cgacctgggc    240
```

```
gaaaggccga ttnatnattt ccaaaacctn gaccacggtg gatttgaaaa tgaccagtcc    300
gacaaccgag gacacggcca cctattttg tggcagaatg aatactggta atagtggttg     360
gaagaatatt tggggcccag gcaccctggt caccgtntcc tcagggcaac ctaa          414
```

```
        <210> 503
        <211> 379
        <212> DNA
        <213> Homo Sapien

        <220>
        <221> misc_feature
        <222> (1)...(379)
        <223> n=A,T,C or G

        <400> 503
atncgatggt gcttggtcaa aggtgtccag tgtcagtcgg tggaggagtc cggggggtcgc    60
ctggtcacgc ctgggacacc cctgacactc acctgcaccg tntctggatt ngacatcagt    120
agctatggag tgagctgggt ccgccaggct ccagggaagg ggctggnata catcggatca    180
ttagtagtag tggtacattt tacgcgagct gggcgaaagg ccgattcacc atttccaaaa    240
cctngaccac ggtggatttg aaaatcacca gtttgacaac cgaggacacg gccacctatt    300
tntgtgccag agggggggttt aattataaag acatttgggg cccaggcacc ctggtcaccg    360
tntccttagg gcaacctaa                                                  379
```

```
        <210> 504
        <211> 19
        <212> PRT
        <213> Artificial Sequence

        <220>
        <223> Made in a lab


        <400> 504
Gly Phe Thr Asn Tyr Thr Asp Phe Glu Asp Ser Pro Tyr Phe Lys Glu
1               5                   10                  15
Asn Ser Ala
```

```
        <210> 505
        <211> 20
        <212> PRT
        <213> Artificial Sequence

        <220>
        <223> Made in a lab

        <400> 505
Lys Glu Asn Ser Ala Phe Pro Pro Phe Cys Cys Asn Asp Asn Val Thr
1               5                   10                  15
Asn Thr Ala Asn
            20
```

```
        <210> 506
        <211> 407
        <212> DNA
        <213> Homo Sapien

        <400> 506
```

175

```
atggagacag gcctgcgctg gcttctcctg gtcgctgcgc tcaaaggtgt ccagtgtcag    60
tcgctggagg agtccggggg tcgcctggtc acgcctggga cacccctgac actcacctgc   120
accgtctctg gattctccct cagtagcaat gcaatgatct gggtccgcca ggctccaggg   180
aagggctgg aatacatcgg atacattagt tatggtggta gcgcatacta cgcgagctgg   240
gtgaaaggcc gattcaccat ctccaaaacc tcgaccacgg tggatctgag aatgaccagt   300
ctgacaaccg aggacacggc cacctatttc tgtgccagaa atagtgattt tagtggtatg   360
ttgtggggcc caggcaccct ggtcaccgtc tcctcagggc aacctaa                 407
```

        <210> 507
        <211> 422
        <212> DNA
        <213> Homo Sapien

        <400> 507
```
atggagacag gcctgcgctg gcttctcctg gtcgctgtgc tcaaaggtgt ccagtgtcag    60
tcggtggagg agtccggggg tcgcctggtc acgcctggga cacccctgac actcacctgt   120
acagtctctg gattctccct cagcaactac gacctgaact gggtccgcca ggctccaggg   180
aagggctgg aatggatcgg gatcattaat tatgttggta ggacggacta cgcgaactgg   240
gcaaaaggcc ggttcaccat ctccaaaacc tcgaccaccg tggatctcaa gatcgccagt   300
ccgacaaccg aggacacggc cacctatttc tgtgccagag ggtggaagtg cgatgagtct   360
ggtccgtgct tgcgcatctg gggcccaggc accctggtca ccgtctcctt agggcaacct   420
aa                                                                  422
```

        <210> 508
        <211> 411
        <212> DNA
        <213> Homo Sapien

        <220>
        <221> misc_feature
        <222> (1)...(411)
        <223> n=A,T,C or G

        <400> 508
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atggagacag gcctcgctgg cttctcctgg tcgctgtgct caaaggtgtc cagtgtcagt    60
cggtggagga gtccgggggt cgcctggtca cgcctgggac acccctgaca ctcacctgca   120
cagtctctgg aatcgacctc agtagctact gcatgagctg ggtccgccag gctccaggga   180
aggggctgga atggatcgga atcattggta ctcctggtga cacatactac gcgaggtggg   240
cgaaaggccg attcaccatc tccaaaacct cgaccacggt gcatntgaaa atcnccagtc   300
cgacaaccga ggacacggcc acctatttct gtgccagaga tcttcgggat ggtagtagta   360
ctggttatta taaaatctgg ggcccaggca ccctggtcac cgtctccttg g            411
```

        <210> 509
        <211> 15
        <212> PRT
        <213> Artificial Sequence

        <220>
        <223> Made in a lab

        <400> 509
```
Leu Cys Lys Phe Thr Glu Trp Ile Glu Lys Thr Val Gln Ala Ser
1               5                   10                  15
```

        <210> 510
        <211> 15
        <212> PRT
        <213> Artificial Sequence

```
        <220>
        <223> Made in a lab

        <400> 510
Pro Glu Tyr Asn Arg Pro Leu Leu Ala Asn Asp Leu Met Leu Ile
 1               5               10              15

        <210> 511
        <211> 15
        <212> PRT
        <213> Artificial Sequence

        <220>
        <223> Made in a lab

        <400> 511

Tyr His Pro Ser Met Phe Cys Ala Gly Gly Gln Asp Gln Lys
 1               5               10              15

        <210> 512
        <211> 15
        <212> PRT
        <213> Artificial Sequence

        <220>
        <223> Made in a lab

        <400> 512
Asp Ser Gly Gly Pro Leu Ile Cys Asn Gly Tyr Leu Gln Gly Leu
 1               5               10              15

        <210> 513
        <211> 15
        <212> PRT
        <213> Artificial Sequence

        <220>
        <223> Made in a lab

        <400> 513
Ala Pro Cys Gly Gln Val Gly Val Pro Asx Val Tyr Thr Asn Leu
 1               5               10              15

        <210> 514
        <211> 15
        <212> PRT
        <213> Artificial Sequence

        <220>
        <223> Made in a lab

        <400> 514
Leu Cys Lys Phe Thr Glu Trp Ile Glu Lys Thr Val Gln Ala Ser
 1               5               10              15

        <210> 515
```

```
        <211> 15
        <212> PRT
        <213> Artificial Sequence

        <220>
        <223> Made in a lab

        <400> 515
Met Val Glu Ala Ser Leu Ser Val Arg His Pro Glu Tyr Asn Arg
 1               5                  10                  15


        <210> 516
        <211> 15
        <212> PRT
        <213> Artificial Sequence

        <220>
        <223> Made in a lab

        <400> 516
Val Ser Glu Ser Asp Thr Ile Arg Ser Ile Ser Ile Ala Ser Gln
 1               5                  10                  15


        <210> 517
        <211> 15
        <212> PRT
        <213> Artificial Sequence

        <220>
        <223> Made in a lab

        <400> 517
Glu Val Cys Ser Lys Leu Tyr Asp Pro Leu Tyr His Pro Ser Met
 1               5                  10                  15


        <210> 518
        <211> 15
        <212> PRT
        <213> Artificial Sequence

        <220>
        <223> Made in a lab

        <400> 518
Arg Ala Glu Pro Gly Thr Glu Ala Arg Arg His Tyr Asp Glu Gly
 1               5                  10                  15


        <210> 519
        <211> 17
        <212> PRT
        <213> Artificial Sequence

        <220>
        <223> Made in a lab

        <400> 519
Arg Ala Glu Pro Gly Thr Glu Ala Arg Arg Asn Tyr Asp Glu Gly Cys
 1               5                  10                  15
```

Gly

        `<210> 520`
        `<211> 25`
        `<212> PRT`
        `<213> Artificial Sequence`

        `<220>`
        `<223> Made in a lab`

        `<400> 520`
`Val Gly Glu Gly Leu Tyr Gln Gly Val Pro Arg Ala Glu Pro Gly Thr`
`1               5                   10                  15`
`Glu Ala Arg Arg His Tyr Asp Glu Gly`
`            20                  25`

        `<210> 521`
        `<211> 21`
        `<212> PRT`
        `<213> Artificial Sequence`

        `<220>`
        `<223> Made in a lab`

        `<400> 521`
`Ala Pro Phe Pro Asn Gly His Val Gly Ala Gly Gly Ser Gly Leu Leu`
`1               5                   10                  15`
`Pro Pro Pro Pro Ala`
`            20`

        `<210> 522`
        `<211> 20`
        `<212> PRT`
        `<213> Artificial Sequence`

        `<220>`
        `<223> Made in a lab`

        `<400> 522`
`Leu Leu Val Val Pro Ala Ile Lys Lys Asp Tyr Gly Ser Gln Glu Asp`
`1               5                   10                  15`
`Phe Thr Gln Val`
`            20`

        `<210> 523`
        `<211> 254`
        `<212> PRT`
        `<213> Artificial Sequence`

        `<220>`
        `<223> Made in a lab`

        `<220>`
        `<221> VARIANT`
        `<222> (1)...(254)`
        `<223> Xaa = any amino acid`

```
       <400> 523
Met Ala Thr Ala Gly Asn Pro Trp Gly Trp Phe Leu Gly Tyr Leu Ile
1               5                   10                  15
Leu Gly Val Ala Gly Ser Leu Val Ser Gly Ser Cys Ser Gln Ile Ile
            20                  25                  30
Asn Gly Glu Asp Cys Ser Pro His Ser Gln Pro Trp Gln Ala Ala Leu
        35                  40                  45
Val Met Glu Asn Glu Leu Phe Cys Ser Gly Val Leu Val His Pro Gln
    50                  55                  60
Trp Val Leu Ser Ala Thr His Cys Phe Gln Asn Ser Tyr Thr Ile Gly
65                  70                  75                  80
Leu Gly Leu His Ser Leu Glu Ala Asp Gln Glu Pro Gly Ser Gln Met
            85                  90                  95
Val Glu Ala Ser Leu Ser Val Arg His Pro Glu Tyr Asn Arg Pro Leu
            100                 105                 110
Leu Ala Asn Asp Leu Met Leu Ile Lys Leu Asp Glu Ser Val Ser Glu
        115                 120                 125
Ser Asp Thr Ile Arg Ser Ile Ser Ile Ala Ser Gln Cys Pro Thr Ala
    130                 135                 140
Gly Asn Ser Cys Leu Val Ser Gly Trp Gly Leu Leu Ala Asn Gly Arg
145                 150                 155                 160
Met Pro Thr Val Leu Gln Cys Val Asn Val Ser Val Val Ser Glu Glu
            165                 170                 175
Val Cys Ser Lys Leu Tyr Asp Pro Leu Tyr His Pro Ser Met Phe Cys
            180                 185                 190
Ala Gly Gly Gly Gln Xaa Gln Xaa Asp Ser Cys Asn Gly Asp Ser Gly
        195                 200                 205
Gly Pro Leu Ile Cys Asn Gly Tyr Leu Gln Gly Leu Val Ser Phe Gly
    210                 215                 220
Lys Ala Pro Cys Gly Gln Val Gly Val Pro Gly Val Tyr Thr Asn Leu
225                 230                 235                 240
Cys Lys Phe Thr Glu Trp Ile Glu Lys Thr Val Gln Ala Ser
            245                 250
```

```
<210> 524
<211> 765
<212> DNA
<213> Homo sapien

<400> 524
atggccacag caggaaatcc ctggggctgg ttcctggggt acctcatcct tggtgtcgca      60
ggatcgctcg tctctggtag ctgcagccaa atcataaacg gcgaggactg cagcccgcac     120
tcgcagccct ggcaggcggc actggtcatg gaaaacgaat tgttctgctc gggcgtcctg     180
gtgcatccgc agtgggtgct gtcagccgca cactgtttcc agaactccta caccatcggg     240
ctgggcctgc acagtcttga ggccgaccaa gagccaggga gccagatggt ggaggccagc     300
ctctccgtac ggcacccaga gtacaacaga cccttgctcg ctaacgacct catgctcatc     360
aagttggacg aatccgtgtc cgagtctgac accatccgga gcatcagcat tgcttcgcag     420
tgccctaccg cggggaactc ttgcctcgtt tctggctggg gtctgctggc aacggcaga      480
atgcctaccg tgctgcagtg cgtgaacgtg tcggtggtgt ctgaggaggt ctgcagtaag     540
ctctatgacc cgctgtacca ccccagcatg ttctgcgccg cggagggca agaccagaag      600
gactcctgca cggtgactc tggggggccc ctgatctgca acgggtactt gcagggcctt      660
gtgtctttcg gaaaagcccc gtgtggccaa gttggcgtgc caggtgtcta caccaacctc     720
tgcaaattca ctgagtggat agagaaaacc gtccaggcca gttaa                     765
```

```
<210> 525
<211> 254
<212> PRT
<213> Homo sapien
```

<400> 525
Met Ala Thr Ala Gly Asn Pro Trp Gly Trp Phe Leu Gly Tyr Leu Ile
1   5   10   15
Leu Gly Val Ala Gly Ser Leu Val Ser Gly Ser Cys Ser Gln Ile Ile
            20   25   30
Asn Gly Glu Asp Cys Ser Pro His Ser Gln Pro Trp Gln Ala Ala Leu
        35   40   45
Val Met Glu Asn Glu Leu Phe Cys Ser Gly Val Leu Val His Pro Gln
    50   55   60
Trp Val Leu Ser Ala Ala His Cys Phe Gln Asn Ser Tyr Thr Ile Gly
65   70   75   80
Leu Gly Leu His Ser Leu Glu Ala Asp Gln Glu Pro Gly Ser Gln Met
                85   90   95
Val Glu Ala Ser Leu Ser Val Arg His Pro Glu Tyr Asn Arg Pro Leu
            100   105   110
Leu Ala Asn Asp Leu Met Leu Ile Lys Leu Asp Glu Ser Val Ser Glu
        115   120   125
Ser Asp Thr Ile Arg Ser Ile Ser Ile Ala Ser Gln Cys Pro Thr Ala
    130   135   140
Gly Asn Ser Cys Leu Val Ser Gly Trp Gly Leu Leu Ala Asn Gly Arg
145   150   155   160
Met Pro Thr Val Leu Gln Cys Val Asn Val Ser Val Val Ser Glu Glu
                165   170   175
Val Cys Ser Lys Leu Tyr Asp Pro Leu Tyr His Pro Ser Met Phe Cys
                180   185   190
Ala Gly Gly Gly Gln Asp Gln Lys Asp Ser Cys Asn Gly Asp Ser Gly
            195   200   205
Gly Pro Leu Ile Cys Asn Gly Tyr Leu Gln Gly Leu Val Ser Phe Gly
    210   215   220
Lys Ala Pro Cys Gly Gln Val Gly Val Pro Gly Val Tyr Thr Asn Leu
225   230   235   240
Cys Lys Phe Thr Glu Trp Ile Glu Lys Thr Val Gln Ala Ser
                245   250

<210> 526
<211> 963
<212> DNA
<213> Homo sapiens

<400> 526
atgagttcct gcaacttcac acatgccacc tttgtgctta ttggtatccc aggattagag 60
aaagcccatt tctgggttgg cttccccctc ctttccatgt atgtagtggc aatgtttgga 120
aactgcatcg tggtcttcat cgtaaggacg gaacgcagcc tgcacgctcc gatgtacctc 180
tttctctgca tgcttgcagc cattgacctg gccttatcca catccaccat gcctaagatc 240
cttgcccttt tctggtttga ttcccgagag attagctttg aggcctgtct tacccagatg 300
ttctttattc atgccctctc agccattgaa tccaccatcc tgctggccat ggcctttgac 360
cgttatgtgg ccatctgcca cccactcgcg catgctgcag tgctcaacaa tacagtaaca 420
gcccagattg gcatcgtggc tgtggtccgc ggatccctct tttttttccc actgcctctg 480
ctgatcaagc ggctggcctt ctgccactcc aatgtcctct cgcactccta ttgtgtccac 540
caggatgtaa tgaagttggc ctatgcagac actttgccca atgtggtata tggtcttact 600
gccattctgc tggtcatggg cgtggacgta atgttcatct ccttgtccta ttttctgata 660
atacgaacgg ttctgcaact gccttccaag tcagagcggg ccaaggcctt tggaacctgt 720
gtgtcacaca ttggtgtggt actcgccttc tatgtgccac ttattggcct ctcagttgta 780
caccgctttg gaaacagcct tcatcccatt gtgcgtgttg tcatgggtga catctacctg 840
ctgctgcctc ctgtcatcaa tccatcatc tatggtgcca aaaccaaaca gatcagaaca 900
cgggtgctgg ctatgttcaa gatcagctgt gacaaggact tgcaggctgt gggaggcaag 960
tga   963

<210> 527
<211> 320
<212> PRT
<213> Homo sapiens

<400> 527
Met Ser Ser Cys Asn Phe Thr His Ala Thr Phe Val Leu Ile Gly Ile
                    5   10   15

Pro Gly Leu Glu Lys Ala His Phe Trp Val Gly Phe Pro Leu Leu Ser
                20   25   30

Met Tyr Val Val Ala Met Phe Gly Asn Cys Ile Val Val Phe Ile Val
            35   40   45

Arg Thr Glu Arg Ser Leu His Ala Pro Met Tyr Leu Phe Leu Cys Met
        50   55   60

Leu Ala Ala Ile Asp Leu Ala Leu Ser Thr Ser Thr Met Pro Lys Ile
65   70   75   80

Leu Ala Leu Phe Trp Phe Asp Ser Arg Glu Ile Ser Phe Glu Ala Cys
                85   90   95

Leu Thr Gln Met Phe Phe Ile His Ala Leu Ser Ala Ile Glu Ser Thr
                100   105   110

Ile Leu Leu Ala Met Ala Phe Asp Arg Tyr Val Ala Ile Cys His Pro
            115   120   125

Leu Arg His Ala Ala Val Leu Asn Asn Thr Val Thr Ala Gln Ile Gly
        130   135   140

Ile Val Ala Val Val Arg Gly Ser Leu Phe Phe Phe Pro Leu Pro Leu
145   150   155   160

Leu Ile Lys Arg Leu Ala Phe Cys His Ser Asn Val Leu Ser His Ser
                165   170   175

Tyr Cys Val His Gln Asp Val Met Lys Leu Ala Tyr Ala Asp Thr Leu
            180   185   190

Pro Asn Val Val Tyr Gly Leu Thr Ala Ile Leu Leu Val Met Gly Val
            195   200   205

Asp Val Met Phe Ile Ser Leu Ser Tyr Phe Leu Ile Ile Arg Thr Val
        210   215   220

Leu Gln Leu Pro Ser Lys Ser Glu Arg Ala Lys Ala Phe Gly Thr Cys
225   230   235   240

Val Ser His Ile Gly Val Val Leu Ala Phe Tyr Val Pro Leu Ile Gly
                245   250   255

Leu Ser Val Val His Arg Phe Gly Asn Ser Leu His Pro Ile Val Arg
            260   265   270

```
Val Val Met Gly Asp Ile Tyr Leu Leu Leu Pro Pro Val Ile Asn Pro
        275              280              285

Ile Ile Tyr Gly Ala Lys Thr Lys Gln Ile Arg Thr Arg Val Leu Ala
    290              295              300

Met Phe Lys Ile Ser Cys Asp Lys Asp Leu Gln Ala Val Gly Gly Lys
305              310              315              320
```

```
        <210> 528
        <211> 20
        <212> DNA
        <213> Homo Sapien

        <400> 528
actatggtcc agaggctgtg                                                                    20

        <210> 529
        <211> 20
        <212> DNA
        <213> Homo Sapien

        <400> 529
atcacctatg tgccgcctct                                                                    20

<210> 530
<211> 1852
<212> DNA
<213> Homo sapiens

<400> 530
ggcacgagaa ttaaaaccct cagcaaaaca ggcatagaag ggacatacct taaagtaata 60
aaaaccacct atgacaagcc cacagccaac ataatactaa atggggaaaa gttagaagca 120
tttcctctga gaactgcaac aataaataca aggatgctgg attttgtcaa atgccttttc 180
tgtgtctgtt gagatgctta tgtgactttg cttttaattc tgtttatgtg attatcacat 240
ttattgactt gcctgtgtta gaccggaaga gctggggtgt ttctcaggag ccaccgtgtg 300
ctgcggcagc ttcgggataa cttgaggctg catcactggg gaagaaacac aytcctgtcc 360
gtggcgctga tggctgagga cagagcttca gtgtggcttc tctgcgactg gcttcttcgg 420
ggagttcttc cttcatagtt catccatatg gctccagagg aaaattatat tattttgtta 480
tggatgaaga gtattacgtt gtgcagatat actgcagtgt cttcatctct tgatgtgtga 540
ttgggtaggt tccaccatgt tgccgcagat gacatgattt cagtacctgt gtctggctga 600
aaagtgtttg tttgtgaatg gatattgtgg tttctggatc tcatcctctg tgggtggaca 660
gctttctcca ccttgctgga agtgacctgc tgtccagaag tttgatggct gaggagtata 720
ccatcgtgca tgcatctttc atttcctgca tttcttcctc cctggatgga caggggggagc 780
ggcaagagca acgtgggcac ttctggagac cacaacgact cctctgtgaa gacgcttggg 840
agcaagaggt gcaagtggtg ctgccactgc ttcccctgct gcagggggag cggcaagagc 900
aacgtggtcg cttggggaga ctacgatgac agcgccttca tggatcccag gtaccacgtc 960
catggagaag atctggacaa gctccacaga gctgcctggt ggggtaaagt ccccagaaag 1020
gatctcatcg tcatgctcag ggacacggat gtgaacaaga gggacaagca aaagaggact 1080
gctctacatc tggcctctgc caatgggaat tcagaagtag taaaactcgt gctggacaga 1140
cgatgtcaac ttaatgtcct tgacaacaaa aagaggacag ctctgacaaa ggccgtacaa 1200
tgccaggaag atgaatgtgc gttaatgttg ctggaacatg gcactgatcc aaatattcca 1260
gatgagtatg aaataccac tctacactat gctgtctaca atgaagataa attaatggcc 1320
aaagcactgc tcttatacgg tgctgatatc gaatcaaaaa acaagcatgg cctcacacca 1380
ctgctacttg gtatacatga gcaaaaacag caagtggtga aatttttaat caagaaaaaa 1440
gcgaatttaa atgcgctgga tagatatgga agaactgctc tcatacttgc tgtatgttgt 1500
ggatcagcaa gtatagtcag ccctctactt gagcaaaatg ttgatgtatc ttctcaagat 1560
ctggaaagac ggccagagag tatgctgttt ctagtcatca tcatgtaatt tgccagttac 1620
```

```
tttctgacta caaagaaaaa cagatgttaa aaatctcttc tgaaaacagc aatccagaac 1680
aagacttaaa gctgacatca gaggaagagt cacaaaggct taaaggaagt gaaaacagcc 1740
agccagagct agaagattta tggctattga agaagaatga agaacacgga agtactcatg 1800
tgggattccc agaaaacctg actaacggtg ccgctgctgg caatggtgat ga           1852
```

<210> 531
<211> 879
<212> DNA
<213> Homo sapiens

<400> 531

```
atgcatcttt catttcctgc atttcttcct ccctggatgg acaggggggag cggcaagagc 60
aacgtgggca cttctggaga ccacaacgac tcctctgtga agacgcttgg gagcaagagg 120
tgcaagtggt gctgccactg cttcccctgc tgcagggggga gcggcaagag caacgtggtc 180
gcttggggag actacgatga cagcgccttc atggatccca ggtaccacgt ccatggagaa 240
gatctggaca agctccacag agctgcctgg tggggtaaag tccccagaaa ggatctcatc 300
gtcatgctca gggacacgga tgtgaacaag agggacaagc aaaagaggac tgctctacat 360
ctggcctctg ccaatgggaa ttcagaagta gtaaaactcg tgctggacag acgatgtcaa 420
cttaatgtcc ttgacaacaa aaagaggaca gctctgacaa aggccgtaca atgccaggaa 480
gatgaatgtg cgttaatgtt gctggaacat ggcactgatc caaatattcc agatgagtat 540
ggaaatacca ctctacacta tgctgtctac aatgaagata aattaatggc caaagcactg 600
ctcttatacg gtgctgatat cgaatcaaaa aacaagcatg ccctcacacc actgctactt 660
ggtatacatg agcaaaaaca gcaagtggtg aaattttaa tcaagaaaaa agcgaattta 720
aatgcgctgg atagatatgg aagaactgct ctcatacttg ctgtatgttg tggatcagca 780
agtatagtca gccctctact tgagcaaaat gttgatgtat cttctcaaga tctggaaaga 840
cggccagaga gtatgctgtt tctagtcatc atcatgtaa                         879
```

<210> 532
<211> 292
<212> PRT
<213> Homo sapiens

<400> 532

```
Met His Leu Ser Phe Pro Ala Phe Leu Pro Pro Trp Met Asp Arg Gly
                5                   10                  15

Ser Gly Lys Ser Asn Val Gly Thr Ser Gly Asp His Asn Asp Ser Ser
                20                  25                  30

Val Lys Thr Leu Gly Ser Lys Arg Cys Lys Trp Cys Cys His Cys Phe
            35                  40                  45

Pro Cys Cys Arg Gly Ser Gly Lys Ser Asn Val Val Ala Trp Gly Asp
        50                  55                  60

Tyr Asp Asp Ser Ala Phe Met Asp Pro Arg Tyr His Val His Gly Glu
65                  70                  75                  80

Asp Leu Asp Lys Leu His Arg Ala Ala Trp Trp Gly Lys Val Pro Arg
                85                  90                  95

Lys Asp Leu Ile Val Met Leu Arg Asp Thr Asp Val Asn Lys Arg Asp
                100                 105                 110

Lys Gln Lys Arg Thr Ala Leu His Leu Ala Ser Ala Asn Gly Asn Ser
            115                 120                 125

Glu Val Val Lys Leu Val Leu Asp Arg Arg Cys Gln Leu Asn Val Leu
```

```
              130                 135                 140
Asp Asn Lys Lys Arg Thr Ala Leu Thr Lys Ala Val Gln Cys Gln Glu
145                 150                 155                 160

Asp Glu Cys Ala Leu Met Leu Leu Glu His Gly Thr Asp Pro Asn Ile
                165                 170                 175

Pro Asp Glu Tyr Gly Asn Thr Thr Leu His Tyr Ala Val Tyr Asn Glu
                180                 185                 190

Asp Lys Leu Met Ala Lys Ala Leu Leu Leu Tyr Gly Ala Asp Ile Glu
        195                 200                 205

Ser Lys Asn Lys His Gly Leu Thr Pro Leu Leu Leu Gly Ile His Glu
        210                 215                 220

Gln Lys Gln Gln Val Val Lys Phe Leu Ile Lys Lys Lys Ala Asn Leu
225                 230                 235                 240

Asn Ala Leu Asp Arg Tyr Gly Arg Thr Ala Leu Ile Leu Ala Val Cys
                245                 250                 255

Cys Gly Ser Ala Ser Ile Val Ser Pro Leu Leu Glu Gln Asn Val Asp
        260                 265                 270

Val Ser Ser Gln Asp Leu Glu Arg Arg Pro Glu Ser Met Leu Phe Leu
        275                 280                 285

Val Ile Ile Met
    290
```

```
<210> 533
<211> 801
<212> DNA
<213> Homo sapiens

<400> 533
atgtacaagc ttcagtgcaa caactgtgct acaaatggag ccacagagag gaaacaagca 60
gcaggctcag gagcagggta tgcgctgcct tcggctctcc aatccatgcc tcagggctcc 120
tatgccactg cacgattctt ggttgccaag aggccaacca caggccatct tgagaaggag 180
tttatgttcc actgcagaaa gcagccagga tcaccatcca ggggacttgg tcttctgtgg 240
ccctggccag acatagaatt tgtgccaagg caggacaagc tcactcagag cagcgtgtta 300
gtacctcaaa tctgtgcgtg ccagacaagg ccaaactggc tcaatgagca accagccacc 360
tctgcagggg tgcgtctgga ggaggtggac cagccaccaa ccttacccag tcaaggaagt 420
ggatggccat gttcccacag cctgagtggc tgccacctga tggctgatat agcaaaggcc 480
ttaggaaaag cagatggccc ttggccctac ctttttgtta gaagaactga tgttccatgt 540
cctgcagcga gtgaggttgg tggctgtgcc cccagctcct ggcacaccct cgcagaggtg 600
actggttgct ctttgagccc tcttagcctt gcccagcatg cacaagcctc agtgctacta 660
ctgtgctaca aatggagcca tataggggaa acgagcagcc atctcaggag caaggtgtat 720
gctgcctttg ggggctccag tccttgcctc aagggtctta tgtcactgtg ggcttcttgg 780
ttgccaagag gcagaccata g                                          801

<210> 534
<211> 266
<212> PRT
<213> Homo sapiens
```

<400> 534
Met Tyr Lys Leu Gln Cys Asn Asn Cys Ala Thr Asn Gly Ala Thr Glu
                5   10   15

Arg Lys Gln Ala Ala Gly Ser Gly Ala Gly Tyr Ala Leu Pro Ser Ala
            20   25   30

Leu Gln Ser Met Pro Gln Gly Ser Tyr Ala Thr Ala Arg Phe Leu Val
        35   .   40   45

Ala Lys Arg Pro Thr Thr Gly His Leu Glu Lys Glu Phe Met Phe His
    50   .   55   60

Cys Arg Lys Gln Pro Gly Ser Pro Ser Arg Gly Leu Gly Leu Leu Trp
65   70   75   80

Pro Trp Pro Asp Ile Glu Phe Val Pro Arg Gln Asp Lys Leu Thr Gln
                85   90   95

Ser Ser Val Leu Val Pro Gln Ile Cys Ala Cys Gln Thr Arg Pro Asn
            100   105   110

Trp Leu Asn Glu Gln Pro Ala Thr Ser Ala Gly Val Arg Leu Glu Glu
        115   .   120   125 ·

Val Asp Gln Pro Pro Thr Leu Pro Ser Gln Gly Ser Gly Trp Pro Cys
    130   135   140

Ser His Ser Leu Ser Gly Cys His Leu Met Ala Asp Ile Ala Lys Ala
145   150   155   160

Leu Gly Lys Ala Asp Gly Pro Trp Pro Tyr Leu Phe Val Arg Arg Thr
                165   170   175

Asp Val Pro Cys Pro Ala Ala Ser Glu Val Gly Gly Cys Ala Pro Ser
            180   185   190

Ser Trp His Thr Leu Ala Glu Val Thr Gly Cys Ser Leu Ser Pro Leu
        195   200   .   205

Ser Leu Ala Gln His Ala Gln Ala Ser Val Leu Leu Leu Cys Tyr Lys
    210   215   220

Trp Ser His Ile Gly Glu Thr Ser Ser His Leu Arg Ser Lys Val Tyr
225   230   235 ·   240

Ala Ala Phe Gly Gly Ser Ser Pro Cys Leu Lys Gly Leu Met Ser Leu
                245   250   255

Trp Ala Ser Trp Leu Pro Arg Gly Arg Pro
            260   265

<210> 535
<211> 6082
<212> DNA
<213> Homo sapiens

```
<400> 535
cctccactat tacagcttat aggaaattac aatccacttt acaggcctca aaggttcatt 60
ctggccgagc ggacaggcgt ggcggccgga gccccagcat ccctgcttga ggtccaggag 120
cggagcccgc ggccactgcc gcctgatcag cgcgaccccg gcccgcgccc gccccgcccg 180
gcaagatgct gcccgtgtac caggaggtga agcccaaccc gctgcaggac gcgaacctct 240
gctcacgcgt gttcttctgg tggctcaatc ccttgtttaa aattggccat aaacggagat 300
tagaggaaga tgatatgtat tcagtgctgc cagaagaccg ctcacagcac cttggagagg 360
agttgcaagg gttctgggat aaagaagttt taagagctga gaatgacgca cagaagcctt 420
ctttaacaag agcaatcata aagtgttact ggaaatctta tttagttttg ggaattttta 480
cgttaattga ggaaagtgcc aaagtaatcc agcccatatt tttgggaaaa attattaatt 540
attttgaaaa ttatgatccc atggattctg tggctttgaa cacagcgtac gcctatgcca 600
cggtgctgac tttttgcacg ctcattttgg ctatactgca tcacttatat ttttatcacg 660
ttcagtgtgc tgggatgagg ttacgagtag ccatgtgcca tatgatttat cggaaggcac 720
ttcgtcttag taacatggcc atggggaaga caaccacagg ccagatagtc aatctgctgt 780
ccaatgatgt gaacaagttt gatcaggtga cagtgttctt acacttcctg tgggcaggac 840
cactgcaggc gatcgcagtg actgccctac tctggatgga gataggaata tcgtgccttg 900
ctgggatggc agttctaatc attctcctgc ccttgcaaag ctgtttttggg aagttgttct 960
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190

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Thr Arg Ala Ile Ile Lys Cys Tyr Trp Lys Ser Tyr Leu Val Leu Gly
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Ile Phe Thr Leu Ile Glu Glu Ser Ala Lys Val Ile Gln Pro Ile Phe
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Leu Gly Lys Ile Ile Asn Tyr Phe Glu Asn Tyr Asp Pro Met Asp Ser
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Val Ala Leu Asn Thr Ala Tyr Ala Tyr Ala Thr Val Leu Thr Phe Cys
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Thr Leu Ile Leu Ala Ile Leu His His Leu Tyr Phe Tyr His Val Gln
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Cys Ala Gly Met Arg Leu Arg Val Ala Met Cys His Met Ile Tyr Arg
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Lys Ala Leu Arg Leu Ser Asn Met Ala Met Gly Lys Thr Thr Thr Gly
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Gln Ile Val Asn Leu Leu Ser Asn Asp Val Asn Lys Phe Asp Gln Val
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Val Thr Ala Leu Leu Trp Met Glu Ile Gly Ile Ser Cys Leu Ala Gly
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192

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            660   665   670

Ala Leu Glu Ser Gln Asp Thr Glu Asn Val Pro Val Thr Leu Ser Glu
        675   680   685

Glu Asn Arg Ser Glu Gly Lys Val Gly Phe Gln Ala Tyr Lys Asn Tyr
        690   695   700

Phe Arg Ala Gly Ala His Trp Ile Val Phe Ile Phe Leu Ile Leu Leu
705   710   715   720

Asn Thr Ala Ala Gln Val Ala Tyr Val Leu Gln Asp Trp Trp Leu Ser
            725   730   735

Tyr Trp Ala Asn Lys Gln Ser Met Leu Asn Val Thr Val Asn Gly Gly
            740   745   750

Gly Asn Val Thr Glu Lys Leu Asp Leu Asn Trp Tyr Leu Gly Ile Tyr
        755   760   765

Ser Gly Leu Thr Val Ala Thr Val Leu Phe Gly Ile Ala Arg Ser Leu
    770   775   780

Leu Val Phe Tyr Val Leu Val Asn Ser Ser Gln Thr Leu His Asn Lys
785   790   795   800

Met Phe Glu Ser Ile Leu Lys Ala Pro Val Leu Phe Phe Asp Arg Asn
            805   810   815

Pro Ile Gly Arg Ile Leu Asn Arg Phe Ser Lys Asp Ile Gly His Leu
            820   825   830

Asp Asp Leu Leu Pro Leu Thr Phe Leu Asp Phe Ile Gln Thr Leu Leu
        835   840   845

Gln Val Val Gly Val Val Ser Val Ala Val Ala Val Ile Pro Trp Ile
    850   855   860

Ala Ile Pro Leu Val Pro Leu Gly Ile Ile Phe Ile Phe Leu Arg Arg
865   870   875   880

Tyr Phe Leu Glu Thr Ser Arg Asp Val Lys Arg Leu Glu Ser Thr Thr
            885   890   895

Arg Ser Pro Val Phe Ser His Leu Ser Ser Ser Leu Gln Gly Leu Trp
            900   905   910

Thr Ile Arg Ala Tyr Lys Ala Glu Glu Arg Cys Gln Glu Leu Phe Asp
        915   920   925

Ala His Gln Asp Leu His Ser Glu Ala Trp Phe Leu Phe Leu Thr Thr
    930   935   940

Ser Arg Trp Phe Ala Val Arg Leu Asp Ala Ile Cys Ala Met Phe Val
945   950   955   960

```
Ile Ile Val Ala Phe Gly Ser Leu Ile Leu Ala Lys Thr Leu Asp Ala
            965                 970                 975

Gly Gln Val Gly Leu Ala Leu Ser Tyr Ala Leu Thr Leu Met Gly Met
            980                 985                 990

Phe Gln Trp Cys Val Arg Gln Ser Ala Glu Val Glu Asn Met Met Ile
            995                 1000                1005

Ser Val Glu Arg Val Ile Glu Tyr Thr Asp Leu Glu Lys Glu Ala Pro
    1010                1015                1020

Trp Glu Tyr Gln Lys Arg Pro Pro Ala Trp Pro His Glu Gly Val
1025                1030            1035                1040

Ile Ile Phe Asp Asn Val Asn Phe Met Tyr Ser Pro Gly Gly Pro Leu
            1045                1050                1055

Val Leu Lys His Leu Thr Ala Leu Ile Lys Ser Gln Glu Lys Val Gly
            1060                1065                1070

Ile Val Gly Arg Thr Gly Ala Gly Lys Ser Ser Leu Ile Ser Ala Leu
            1075                1080                1085

Phe Arg Leu Ser Glu Pro Glu Gly Lys Ile Trp Ile Asp Lys Ile Leu
    1090                1095                1100

Thr Thr Glu Ile Gly Leu His Asp Leu Arg Lys Lys Met Ser Ile Ile
1105                1110                1115                1120

Pro Gln Glu Pro Val Leu Phe Thr Gly Thr Met Arg Lys Asn Leu Asp
            1125                1130                1135

Pro Phe Asn Glu His Thr Asp Glu Glu Leu Trp Asn Ala Leu Gln Glu
            1140                1145                1150

Val Gln Leu Lys Glu Thr Ile Glu Asp Leu Pro Gly Lys Met Asp Thr
    1155                1160                1165

Glu Leu Ala Glu Ser Gly Ser Asn Phe Ser Val Gly Gln Arg Gln Leu
    1170                1175                1180

Val Cys Leu Ala Arg Ala Ile Leu Arg Lys Asn Gln Ile Leu Ile Ile
1185                1190                1195                1200

Asp Glu Ala Thr Ala Asn Val Asp Pro Arg Thr Asp Glu Leu Ile Gln
            1205                1210                1215

Lys Lys Ser Gly Arg Asn Leu Pro Thr Ala Pro Cys
            1220                1225
```

<210> 538
<211> 1261
<212> PRT
<213> Homo sapiens

<400> 538
Met Tyr Ser Val Leu Pro Glu Asp Arg Ser Gln His Leu Gly Glu Glu

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                    5                        10                      15
    Leu Gln Gly Phe Trp Asp Lys Glu Val Leu Arg Ala Glu Asn Asp Ala
                20                  25                  30

    Gln Lys Pro Ser Leu Thr Arg Ala Ile Ile Lys Cys Tyr Trp Lys Ser
                35                  40                  45

    Tyr Leu Val Leu Gly Ile Phe Thr Leu Ile Glu Glu Ser Ala Lys Val
            50                  55                  60

    Ile Gln Pro Ile Phe Leu Gly Lys Ile Ile Asn Tyr Phe Glu Asn Tyr
    65                  70                  75                  80

    Asp Pro Met Asp Ser Val Ala Leu Asn Thr Ala Tyr Ala Tyr Ala Thr
                    85                  90                  95

    Val Leu Thr Phe Cys Thr Leu Ile Leu Ala Ile Leu His His Leu Tyr
                100                 105                 110

    Phe Tyr His Val Gln Cys Ala Gly Met Arg Leu Arg Val Ala Met Cys
            115                 120                 125

    His Met Ile Tyr Arg Lys Ala Leu Arg Leu Ser Asn Met Ala Met Gly
        130                 135                 140

    Lys Thr Thr Thr Gly Gln Ile Val Asn Leu Leu Ser Asn Asp Val Asn
    145                 150                 155                 160

    Lys Phe Asp Gln Val Thr Val Phe Leu His Phe Leu Trp Ala Gly Pro
                165                 170                 175

    Leu Gln Ala Ile Ala Val Thr Ala Leu Leu Trp Met Glu Ile Gly Ile
                180                 185                 190

    Ser Cys Leu Ala Gly Met Ala Val Leu Ile Ile Leu Leu Pro Leu Gln
            195                 200                 205

    Ser Cys Phe Gly Lys Leu Phe Ser Ser Leu Arg Ser Lys Thr Ala Thr
        210                 215                 220

    Phe Thr Asp Ala Arg Ile Arg Thr Met Asn Glu Val Ile Thr Gly Ile
    225                 230                 235                 240

    Arg Ile Ile Lys Met Tyr Ala Trp Glu Lys Ser Phe Ser Asn Leu Ile
                245                 250                 255

    Thr Asn Leu Arg Lys Lys Glu Ile Ser Lys Ile Leu Arg Ser Ser Cys
                260                 265                 270

    Leu Arg Gly Met Asn Leu Ala Ser Phe Phe Ser Ala Ser Lys Ile Ile
        275                 280                 285

    Val Phe Val Thr Phe Thr Thr Tyr Val Leu Leu Gly Ser Val Ile Thr
        290                 295                 300

    Ala Ser Arg Val Phe Val Ala Val Thr Leu Tyr Gly Ala Val Arg Leu
    305                 310                 315                 320
```

```
Thr Val Thr Leu Phe Phe Pro Ser Ala Ile Glu Arg Val Ser Glu Ala
            325             330             335

Ile Val Ser Ile Arg Arg Ile Gln Thr Phe Leu Leu Leu Asp Glu Ile
            340             345             350

Ser Gln Arg Asn Arg Gln Leu Pro Ser Asp Gly Lys Lys Met Val His
        355             360             365

Val Gln Asp Phe Thr Ala Phe Trp Asp Lys Ala Ser Glu Thr Pro Thr
    370             375             380

Leu Gln Gly Leu Ser Phe Thr Val Arg Pro Gly Glu Leu Leu Ala Val
385             390             395             400

Val Gly Pro Val Gly Ala Gly Lys Ser Ser Leu Leu Ser Ala Val Leu
            405             410             415

Gly Glu Leu Ala Pro Ser His Gly Leu Val Ser Val His Gly Arg Ile
            420             425             430

Ala Tyr Val Ser Gln Gln Pro Trp Val Phe Ser Gly Thr Leu Arg Ser
            435             440             445

Asn Ile Leu Phe Gly Lys Lys Tyr Glu Lys Glu Arg Tyr Glu Lys Val
    450             455             460

Ile Lys Ala Cys Ala Leu Lys Lys Asp Leu Gln Leu Leu Glu Asp Gly
465             470             475             480

Asp Leu Thr Val Ile Gly Asp Arg Gly Thr Thr Leu Ser Gly Gly Gln
            485             490             495

Lys Ala Arg Val Asn Leu Ala Arg Ala Val Tyr Gln Asp Ala Asp Ile
            500             505             510

Tyr Leu Leu Asp Asp Pro Leu Ser Ala Val Asp Ala Glu Val Ser Arg
            515             520             525

His Leu Phe Glu Leu Cys Ile Cys Gln Ile Leu His Glu Lys Ile Thr
    530             535             540

Ile Leu Val Thr His Gln Leu Gln Tyr Leu Lys Ala Ala Ser Gln Ile
545             550             555             560

Leu Ile Leu Lys Asp Gly Lys Met Val Gln Lys Gly Thr Tyr Thr Glu
            565             570             575

Phe Leu Lys Ser Gly Ile Asp Phe Gly Ser Leu Leu Lys Lys Asp Asn
            580             585             590

Glu Glu Ser Glu Gln Pro Pro Val Pro Gly Thr Pro Thr Leu Arg Asn
        595             600             605

Arg Thr Phe Ser Glu Ser Ser Val Trp Ser Gln Gln Ser Ser Arg Pro
    610             615             620
```

```
Ser Leu Lys Asp Gly Ala Leu Glu Ser Gln Asp Thr Glu Asn Val Pro
625             630             635             640

Val Thr Leu Ser Glu Glu Asn Arg Ser Glu Gly Lys Val Gly Phe Gln
            645             650             655

Ala Tyr Lys Asn Tyr Phe Arg Ala Gly Ala His Trp Ile Val Phe Ile
        660             665             670

Phe Leu Ile Leu Leu Asn Thr Ala Ala Gln Val Ala Tyr Val Leu Gln
        675             680             685

Asp Trp Trp Leu Ser Tyr Trp Ala Asn Lys Gln Ser Met Leu Asn Val
    690             695             700

Thr Val Asn Gly Gly Gly Asn Val Thr Glu Lys Leu Asp Leu Asn Trp
705             710             715             720

Tyr Leu Gly Ile Tyr Ser Gly Leu Thr Val Ala Thr Val Leu Phe Gly
            725             730             735

Ile Ala Arg Ser Leu Leu Val Phe Tyr Val Leu Val Asn Ser Ser Gln
        740             745             750

Thr Leu His Asn Lys Met Phe Glu Ser Ile Leu Lys Ala Pro Val Leu
        755             760             765

Phe Phe Asp Arg Asn Pro Ile Gly Arg Ile Leu Asn Arg Phe Ser Lys
    770             775             780

Asp Ile Gly His Leu Asp Asp Leu Leu Pro Leu Thr Phe Leu Asp Phe
785             790             795             800

Ile Gln Thr Leu Leu Gln Val Val Gly Val Val Ser Val Ala Val Ala
            805             810             815

Val Ile Pro Trp Ile Ala Ile Pro Leu Val Pro Leu Gly Ile Ile Phe
        820             825             830

Ile Phe Leu Arg Arg Tyr Phe Leu Glu Thr Ser Arg Asp Val Lys Arg
        835             840             845

Leu Glu Ser Thr Thr Arg Ser Pro Val Phe Ser His Leu Ser Ser Ser
850             855             860

Leu Gln Gly Leu Trp Thr Ile Arg Ala Tyr Lys Ala Glu Glu Arg Cys
865             870             875             880

Gln Glu Leu Phe Asp Ala His Gln Asp Leu His Ser Glu Ala Trp Phe
            885             890             895

Leu Phe Leu Thr Thr Ser Arg Trp Phe Ala Val Arg Leu Asp Ala Ile
        900             905             910

Cys Ala Met Phe Val Ile Ile Val Ala Phe Gly Ser Leu Ile Leu Ala
        915             920             925

Lys Thr Leu Asp Ala Gly Gln Val Gly Leu Ala Leu Ser Tyr Ala Leu
```

```
            930                  935                  940

Thr Leu Met Gly Met Phe Gln Trp Cys Val Arg Gln Ser Ala Glu Val
945             950                  955                  960

Glu Asn Met Met Ile Ser Val Glu Arg Val Ile Glu Tyr Thr Asp Leu
                965                  970                  975

Glu Lys Glu Ala Pro Trp Glu Tyr Gln Lys Arg Pro Pro Pro Ala Trp
            980                  985                  990

Pro His Glu Gly Val Ile Ile Phe Asp Asn Val Asn Phe Met Tyr Ser
        995                  1000                 1005

Pro Gly Gly Pro Leu Val Leu Lys His Leu Thr Ala Leu Ile Lys Ser
    1010                 1015                 1020

Gln Glu Lys Val Gly Ile Val Gly Arg Thr Gly Ala Gly Lys Ser Ser
1025                 1030                 1035                 1040

Leu Ile Ser Ala Leu Phe Arg Leu Ser Glu Pro Glu Gly Lys Ile Trp
            1045                 1050                 1055

Ile Asp Lys Ile Leu Thr Thr Glu Ile Gly Leu His Asp Leu Arg Lys
        1060                 1065                 1070

Lys Met Ser Ile Ile Pro Gln Glu Pro Val Leu Phe Thr Gly Thr Met
        1075                 1080                 1085

Arg Lys Asn Leu Asp Pro Phe Asn Glu His Thr Asp Glu Glu Leu Trp
    1090                 1095                 1100

Asn Ala Leu Gln Glu Val Gln Leu Lys Glu Thr Ile Glu Asp Leu Pro
1105                 1110                 1115                 1120

Gly Lys Met Asp Thr Glu Leu Ala Glu Ser Gly Ser Asn Phe Ser Val
            1125                 1130                 1135

Gly Gln Arg Gln Leu Val Cys Leu Ala Arg Ala Ile Leu Arg Lys Asn
        1140                 1145                 1150

Gln Ile Leu Ile Ile Asp Glu Ala Thr Ala Asn Val Asp Pro Arg Thr
    1155                 1160                 1165

Asp Glu Leu Ile Gln Lys Lys Ile Arg Glu Lys Phe Ala His Cys Thr
    1170                 1175                 1180

Val Leu Thr Ile Ala His Arg Leu Asn Thr Ile Ile Asp Ser Asp Lys
1185                 1190                 1195                 1200

Ile Met Val Leu Asp Ser Gly Arg Leu Lys Glu Tyr Asp Glu Pro Tyr
            1205                 1210                 1215

Val Leu Leu Gln Asn Lys Glu Ser Leu Phe Tyr Lys Met Val Gln Gln
            1220                 1225                 1230

Leu Gly Lys Ala Glu Ala Ala Ala Leu Thr Glu Thr Ala Lys Gln Arg
        1235                 1240                 1245
```

```
Trp Gly Phe Thr Met Leu Ala Arg Leu Val Ser Asn Ser
    1250                1255                1260
```

```
<210> 539
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Made in a lab

<400> 539
Cys Leu Ser His Ser Val Ala Val Val Thr
 1               5               10
```

```
<210> 540
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Made in a lab

<400> 540
Ala Val Val Thr Ala Ser Ala Ala Leu
 1               5
```

```
<210> 541
<211> 14
<212> PRT
<213> Homo sapiens

<400> 541
Leu Ala Gly Leu Leu Cys Pro Asp Pro Arg Pro Leu Glu Leu
                5                10
```

```
<210> 542
<211> 15
<212> PRT
<213> Homo sapiens

<400> 542
Thr Gln Val Val Phe Asp Lys Ser Asp Leu Ala Lys Tyr Ser Ala
                5                10                15
```

```
<210> 543
<211> 12
<212> PRT
<213> Homo sapiens

<400> 543
Phe Met Gly Ser Ile Val Gln Leu Ser Gln Ser Val
                5                10
```

```
<210> 544
<211> 18
<212> PRT
<213> Homo sapiens

<400> 544
Thr Tyr Val Pro Pro Leu Leu Leu Glu Val Gly Val Glu Glu Lys Phe
                    5                   10                  15

Met Thr
```

```
<210> 545
<211> 18
<212> PRT
<213> Homo sapiens

<400> 545
Met Asp Arg Leu Val Gln Arg Phe Gly Thr Arg Ala Val Tyr Leu Ala
                    5                   10                  15

Ser Val
```

```
<210> 546
<211> 29
<212> PRT
<213> Homo sapiens

<400> 546
Phe Val Gly Glu Gly Leu Tyr Gln Gly Val Pro Arg Ala Glu Pro Gly
                    5                   10                  15

Thr Glu Ala Arg Arg His Tyr Asp Glu Gly Val Arg Met
            20                  25
```

```
<210> 547
<211> 58
<212> PRT
<213> Homo sapiens

<400> 547
Val Ala Glu Glu Ala Ala Leu Gly Pro Thr Glu Pro Ala Glu Gly Leu
                    5                   10                  15

Ser Ala Pro Ser Leu Ser Pro His Cys Cys Pro Cys Arg Ala Arg Leu
            20                  25                  30

Ala Phe Arg Asn Leu Gly Ala Leu Leu Pro Arg Leu His Gln Leu Cys
        35                  40                  45

Cys Arg Met Pro Arg Thr Leu Arg Arg Leu
    50                  55
```

<210> 548
<211> 18
<212> PRT
<213> Homo sapiens

<400> 548
Ile Asp Trp Asp Thr Ser Ala Leu Ala Pro Tyr Leu Gly Thr Gln Glu
                    5   10   15

Glu Cys

<210> 549
<211> 18
<212> PRT
<213> Homo sapiens

<400> 549
Leu Glu Ala Leu Leu Ser Asp Leu Phe Arg Asp Pro Asp His Cys Arg
                    5   10   15

Gln Ala

<210> 550
<211> 14
<212> PRT
<213> Homo sapiens

<400> 550
Ser Asp His Trp Arg Gly Arg Tyr Gly Arg Arg Arg Pro Phe
                    5   10

<210> 551
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Made in a lab

<400> 551
Phe Asp Lys Ser Asp Leu Ala Lys Tyr Ser Ala
                5   10

<210> 552
<211> 2577
<212> DNA
<213> Homo sapiens

<400> 552
agcatatgta acatgacctg tgcttcagtg ttcttttgtg atcaaaaatt ccttactttt 60
agttttttat ctatggtaga accacccaga gcaggggtcc tcaactccca ggccacagac 120
tcataccagt ccacggacta ttatgaacca caccacacag gaggaggtga gcactaggca 180
agccaaggaa gcttcacctg tacttacagc cacacgccat ggctcatatt acagcctgaa 240

```
ctctgcctcc actcagatca gtgataacat tagaaactca ttggagcacg aaccctgttg 300
tgaactgcct atccgaagga tctaggttgt gtgcttcgta tgagaatcta atgccagatg 360
atctatcatt gtctcacttt gcccccagat aagaccatct agttgcagaa aaataagctc 420
agagcttcca ctgattctac attatggata tgtgccgccg aagcaagcac aaagccctac 480
ttttacacat gcctagtgat gcttcatgga caaggcttgg ctctgttgag tccaactaac 540
ctacctgaga ttctgagatt tctcttcaat ggcttcctgt gagctagagt ttgaaaatat 600
cttaaaatct tgagctagag atggaagtag cttggacgat tttcattatc atgtaaatcg 660
ggtcactcaa ggggccaacc acagctggga gccactgctc aggggaaggt tcatatggga 720
ctttctactg cccaaggttc tatacaggat ataaaggtgc ctcacagtat agatctggta 780
gcaaagaaga agaaacaaac actgatctct ttctgccacc cctctgaccc tttggaactc 840
ctctgaccct ttagaacaag cctacctaat atctgctaga gaaaagacca acaacggcct 900
caaaggatct cttaccatga aggtctcagc taattcttgg ctaagatgtg ggttccacat 960
taggttctga atatggggggg aagggtcaat ttgctcattt tgtgtgtgga taaagtcagg 1020
atgcccaggg gccagagcag ggggctgctg ctttgggaac aatggctgag catataacca 1080
taggtatggg aacaaaaaac atcaaagtca ctgtatcaat tgccatgaag actcgaggga 1140
cctgaatcta ccgattcatc ttaaggcagc aggaccagtt tgagtggcaa caatgcagca 1200
gcagaatcaa tggaaacaac agaatgattg caatgtcctt ttttttctcc tccttctgac 1260
ttgataaaag ggaccgtctt ccttggattt agtgaacccc tttggttcct gaaaaattca 1320
aggagtatct aggacatagt ccccagaaga cagtacaaga ctttctgata aactggacat 1380
ttcaagrccc aaataactaa tcagaaaaat caaagatgtg atactatttt ttatcccatg 1440
cataggtgct acacttggat caaatgaaca atgttgggat ctytatggat aaaggtctta 1500
aaagtcctga gataaagaat cctgcaccca ctggtacttc taacttgtct tgtttttgt 1560
ctgwtttctg gctgatgcag gggactaact cactgccacg cgaaaactac ctgaactgaa 1620
ctatgacatc tcacctgata tgtaagatgt aactgttata attattttaa acctcaattt 1680
agcattaact agccttttaa tgtaaacact tacacattat gaygactaga aacagcatac 1740
tctctggccg tctgtccaga tagatcttga gaagatacat caatgttttg ctcaagtaga 1800
aggctgacta tacttgccga tccacaacat acagcaagta tgagagcagt tctaaaatga 1860
cagagatagg aacagtaata aagttattkt aaaagctaat ttgatatact ttaccaattt 1920
aacatcttgc ctgtccgtgc agaatcaaac atttacatgc actaaaagac ataagcatct 1980
tcagtgctca agtgttcatc tttgtaaaat accaccaagg ttaaaaggaa gggacaaaaa 2040
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ttgatggaca agaaacaata ttagggccac ttatctgaaa tgaacaaaga tttaagtgaa 2160
gatttcatca cagcttccct agactgatat gctgtaatag aaaatcagct aggggggtaaa 2220
ataaataaga gctctctgca tgctgaaagc aagtaagatt aataataatg gtaagaatag 2280
tagtcacagg agtttcagtt aatgatgcca ataagcatgt gctaggcact gaattaaatg 2340
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tatgacaaca tatttggtgg taaataacgt tcccaaggtc acacacctag caagtaagaa 2460
agttaggaat taaacccagt attgtgtgaa tctaaagcct aactttttc tctttatcac 2520
ccacctacgg cttgtcttca ttaaaggaaa agtgtatcca cttaaaaaaa aaaaaaa   2577
```

<210> 553
<211> 58
<212> PRT
<213> Homo sapiens

<400> 553
Ser Ile Cys Asn Met Thr Cys Ala Ser Val Phe Phe Cys Asp Gln Lys
                5   10   15

Phe Leu Thr Phe Ser Phe Leu Ser Met Val Glu Pro Pro Arg Ala Gly
            20   25   30

Val Leu Asn Ser Gln Ala Thr Asp Ser Tyr Gln Ser Thr Asp Tyr Tyr
        35   40   45

Glu Pro His His Thr Gly Gly Gly Glu His
    50   55

```
<210> 554
<211> 59
<212> PRT
<213> Homo sapiens

<400> 554
Leu Gln Lys Asn Lys Leu Arg Ala Ser Thr Asp Ser Thr Leu Trp Ile
                5                   10                  15

Cys Ala Ala Glu Ala Ser Thr Lys Pro Tyr Phe Tyr Thr Cys Leu Val
                20                  25                  30

Met Leu His Gly Gln Gly Leu Ala Leu Leu Ser Pro Thr Asn Leu Pro
            35                  40                  45

Glu Ile Leu Arg Phe Leu Phe Asn Gly Phe Leu
        50                  55
```

```
<210> 555
<211> 71
<212> PRT
<213> Homo sapiens

<400> 555
Leu Gly Arg Phe Ser Leu Ser Cys Lys Ser Gly His Ser Arg Gly Gln
                5                   10                  15

Pro Gln Leu Gly Ala Thr Ala Gln Gly Lys Val His Met Gly Leu Ser
                20                  25                  30

Thr Ala Gln Gly Ser Ile Gln Asp Ile Lys Val Pro His Ser Ile Asp
            35                  40                  45

Leu Val Ala Lys Lys Lys Lys Gln Thr Leu Ile Ser Phe Cys His Pro
        50                  55                  60

Ser Asp Pro Leu Glu Leu Leu
    65                  70
```

```
<210> 556
<211> 81
<212> PRT
<213> Homo sapiens

<400> 556
Asn His Pro Glu Gln Gly Ser Ser Thr Pro Arg Pro Gln Thr His Thr
                5                   10                  15

Ser Pro Arg Thr Ile Met Asn His Thr Thr Gln Glu Glu Val Ser Thr
                20                  25                  30

Arg Gln Ala Lys Glu Ala Ser Pro Val Leu Thr Ala Thr Arg His Gly
            35                  40                  45

Ser Tyr Tyr Ser Leu Asn Ser Ala Ser Thr Gln Ile Ser Asp Asn Ile
```

```
                50              55              60
Arg Asn Ser Leu Glu His Glu Pro Cys Cys Glu Leu Pro Ile Arg Arg
65                  70              75                  80

Ile
```

```
<210> 557
<211> 54
<212> PRT
<213> Homo sapiens

<400> 557
Ser Leu Ser Ala Thr Pro Leu Thr Leu Trp Asn Ser Ser Asp Pro Leu
                5               10                  15

Glu Gln Ala Tyr Leu Ile Ser Ala Arg Glu Lys Thr Asn Asn Gly Leu
            20              25                  30

Lys Gly Ser Leu Thr Met Lys Val Ser Ala Asn Ser Trp Leu Arg Cys
        35              40                  45

Gly Phe His Ile Arg Phe
    50
```

```
<210> 558
<211> 77
<212> PRT
<213> Homo sapiens

<220>
<221> VARIANT
<222> (1)...(77)
<223> Xaa = Any amino acid

<400> 558
Asn Asp Arg Asp Arg Asn Ser Asn Lys Val Ile Xaa Lys Ala Asn Leu
                5               10                  15

Ile Tyr Phe Thr Asn Leu Thr Ser Cys Leu Ser Val Gln Asn Gln Thr
            20              25                  30

Phe Thr Cys Thr Lys Arg His Lys His Leu Gln Cys Ser Ser Val His
        35              40                  45

Leu Cys Lys Ile Pro Pro Arg Leu Lys Gly Arg Asp Lys Lys Lys Lys
    50              55              60

Pro Ser Tyr Leu Ser Gly Val Leu His Ser Arg Ser Tyr
65              70              75
```

```
<210> 559
<211> 50
<212> PRT
```

<213> Homo sapiens

<400> 559
Thr Leu Pro Pro Leu Arg Ser Val Ile Thr Leu Glu Thr His Trp Ser
                5   10   15

Thr Asn Pro Val Val Asn Cys Leu Ser Glu Gly Ser Arg Leu Cys Ala
            20   25   30

Ser Tyr Glu Asn Leu Met Pro Asp Asp Leu Ser Leu Ser His Phe Ala
        35   40   45

Pro Arg
    50

<210> 560
<211> 56
<212> PRT
<213> Homo sapiens

<400> 560
Ile Gly Ser Leu Lys Gly Pro Thr Thr Ala Gly Ser His Cys Ser Gly
                5   10   15

Glu Gly Ser Tyr Gly Thr Phe Tyr Cys Pro Arg Phe Tyr Thr Gly Tyr
            20   25   30

Lys Gly Ala Ser Gln Tyr Arg Ser Gly Ser Lys Glu Glu Glu Thr Asn
        35   40   45

Thr Asp Leu Phe Leu Pro Pro Leu
    50   55

<210> 561
<211> 57
<212> PRT
<213> Homo sapiens

<220>
<221> VARIANT
<222> (1)...(57)
<223> Xaa = Any amino acid

<400> 561
Val Leu His Leu Asp Gln Met Asn Asn Val Gly Ile Xaa Met Asp Lys
                5   10   15

Gly Leu Lys Ser Pro Glu Ile Lys Asn Pro Ala Pro Thr Gly Thr Ser
            20   25   30

Asn Leu Ser Cys Phe Leu Ser Xaa Phe Trp Leu Met Gln Gly Thr Asn
        35   40   45

Ser Leu Pro Arg Glu Asn Tyr Leu Asn
    50   55

```
<210> 562
<211> 59
<212> PRT
<213> Homo sapiens

<220>
<221> VARIANT
<222> (1)...(59)
<223> Xaa = Any amino acid

<400> 562
Asp Leu Tyr Pro Xaa Arg Ser Gln His Cys Ser Phe Asp Pro Ser Val
                  5                   10                  15

Ala Pro Met His Gly Ile Lys Asn Ser Ile Thr Ser Leu Ile Phe Leu
              20                  25                  30

Ile Ser Tyr Leu Xaa Leu Glu Met Ser Ser Leu Ser Glu Ser Leu Val
          35                  40                  45

Leu Ser Ser Gly Asp Tyr Val Leu Asp Thr Pro
      50                  55


<210> 563
<211> 79
<212> PRT
<213> Homo sapiens

<400> 563
Cys Phe Leu Phe Pro Tyr Leu Trp Leu Tyr Ala Gln Pro Leu Phe Pro
                  5                   10                  15

Lys Gln Gln Pro Pro Ala Leu Ala Pro Gly His Pro Asp Phe Ile His
              20                  25                  30

Thr Gln Asn Glu Gln Ile Asp Pro Ser Pro His Ile Gln Asn Leu Met
          35                  40                  45

Trp Asn Pro His Leu Ser Gln Glu Leu Ala Glu Thr Phe Met Val Arg
      50                  55                  60

Asp Pro Leu Arg Pro Leu Leu Val Phe Ser Leu Ala Asp Ile Arg
  65                  70                  75


<210> 564
<211> 64
<212> PRT
<213> Homo sapiens

<400> 564
Ala Cys Ser Lys Gly Ser Glu Glu Phe Gln Arg Val Arg Gly Val Ala
                  5                   10                  15

Glu Arg Asp Gln Cys Leu Phe Leu Leu Leu Cys Tyr Gln Ile Tyr Thr
              20                  25                  30
```

```
Val Arg His Leu Tyr Ile Leu Tyr Arg Thr Leu Gly Ser Arg Lys Ser
         35              40              45

His Met Asn Leu Pro Leu Ser Ser Gly Ser Gln Leu Trp Leu Ala Pro
     50              55              60
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<210> 565
<211> 57
<212> PRT
<213> Homo sapiens

<220>
<221> VARIANT
<222> (1)...(57)
<223> Xaa = Any amino acid

<400> 565
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Leu Tyr Tyr Cys Ser Tyr Leu Cys His Phe Arg Thr Ala Leu Ile Leu
             5               10              15

Ala Val Cys Cys Gly Ser Ala Ser Ile Val Ser Leu Leu Leu Glu Gln
         20              25              30

Asn Ile Asp Val Ser Ser Gln Asp Leu Ser Gly Gln Thr Ala Arg Glu
         35              40              45

Tyr Ala Val Ser Ser Xaa His Asn Val
     50              55
```

<210> 566
<211> 55
<212> PRT
<213> Homo sapiens

<400> 566
```
Ile Leu Leu Glu Phe Phe Arg Asn Gln Arg Gly Ser Leu Asn Pro Arg
             5               10              15

Lys Thr Val Pro Phe Ile Lys Ser Glu Gly Gly Glu Lys Lys Gly His
         20              25              30

Cys Asn His Ser Val Val Ser Ile Asp Ser Ala Ala Ala Leu Leu Pro
         35              40              45

Leu Lys Leu Val Leu Leu Pro
     50              55
```

<210> 567
<211> 51
<212> PRT
<213> Homo sapiens

<400> 567
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Tyr Ser Asp Phe Asp Val Phe Cys Ser His Thr Tyr Gly Tyr Met Leu
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207

Ser His Cys Ser Gln Ser Ser Ser Pro Leu Leu Trp Pro Leu Gly Ile
            20   25   30

Leu Thr Leu Ser Thr His Lys Met Ser Lys Leu Thr Leu Pro Pro Ile
            35   40   45

Phe Arg Thr
        50

<210> 568
<211> 75
<212> PRT
<213> Homo sapiens

<400> 568
Lys Val Gly Glu Tyr Ile Leu Gln Ser Leu Leu Arg Ile Arg Lys Ile
                    5   10   15

Tyr Val Ala Phe Asn Ser Val Pro Ser Thr Cys Leu Leu Ala Ser Leu
            20   25   30

Thr Glu Thr Pro Val Thr Thr Ile Leu Thr Ile Ile Ile Asn Leu Thr
            35   40   45

Cys Phe Gln His Ala Glu Ser Ser Tyr Leu Phe Tyr Pro Leu Ala Asp
        50   55   60

Phe Leu Leu Gln His Ile Ser Leu Gly Lys Leu
    65   70   75

<210> 569
<211> 4809
<212> DNA
<213> Homo sapiens

<400> 569
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ggacagatgt ccgataatcc tttttacatt ttggcatcct tgggtagctc gtcttgtagg 180
aatggacttg cttcaaagtg gaggcaggca gatccttcag acgggtatat ggagccctgt 240
tttcagttgc tttttctaatt ctctcttatc gtttacctca aaatcttcct gaggtctcgc 300
ttccttttaa aatccttgtc tactttgcag catcactctg acactcccat tgattcctca 360
gcacctactg actacacggt taggagtgca agggtagaat tcatgtttta ttcatctttg 420
ggtctgtagc acccagcaaa gtgctcagta aatgcgcagt aattgatttg acctctgaac 480
aaatacacac tgtactaaga atctacacac cgaaagacaa aaacaagaca aatttgagtg 540
ctacaggtgt cacgcttggc atcacacatg tgcctgtgta ttcctctagg tggttaccag 600
gagctctgcc actgcatgtc cactagtgac gggttcgctc caccaccccca gctgggtagc 660
cgctgctctc acataagggg tccaattaaa attgccagga ataaattccc ccggactttg 720
acttctcaag agctaagaag gtttgctgag tattctggca tgatgtttgg tgatcaaaca 780
actgctggcc aaaaatgatg agtatttccc cctcttgctg aagatgtgct ccatacaata 840
gtccatcaca ttcatcattc atcagtctgg aagtgtgcag aacaacatgt aatagataat 900
atgattggct gcacacttcc agactgatga atgatgaatg tgatggacta ttgtatggag 960
cacatcttca gcaagagggg gaaatactca tcattttatc tattacatgt tgttctggtt 1020

```
tttttttttt tccaatgtcc agcctaaact ataaagtact ttgagaacgc acagtgagcc 1080
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gcaaacaatg agggcactat tggaaacata ctgtgctgca cagagcattt acaccgctta 1200
tctttaatct tccccagcaa tccttgcttt gtgcgcattt atgatccttg ctctcagaag 1260
tccacatact tttcccccaac cgtaacaaat tatttaactc atctaatgta tgtatgtccg 1320
cgcagtctga aaacagtaat tgtccttggg aagaagtgag tttaagagag ctctagggca 1380
ctcatcacaa ctccagccct gccctccatg tggtagcagc tctttggact ggggctaagt 1440
gcttattctt gtgcttcatt cctggtaagc tcaatttctt taccttagga taactttgct 1500
ggaaaagggc tcagattcag ccgaccattg tggcctctgt ggctgtcaca gcttgtccct 1560
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actttgaaat agttgtaaga gttaagaaaa agcacaaaac tgagatcatc agagcagctt 1860
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attcctttgt ggagtctggt ttggtcttgg ttttcttggt gtttgattca ttttttttacg 2340
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agcagaacga gttggatgta tgttttggaa gagattatga ggaaccggct catgtgatga 2460
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ggttgaaggc aggagaagat ggatgtccca gctcagcagg caggcaggaa gcaaatgggg 2640
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agcctcatcc caaaacactc tccagacaca cgcagaaatg tttcatctgg gcaccctgtg 2820
gccagtcatg ctgacacaca gaactaacca tgacatggat tcttcttaaa gcagtgatag 2880
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ttggacactg atgactttat gcccagatta cactggaggc ctgtgctgat tttctaacac 3060
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cagcacagca gctgacatcc tgtgtgacag ccttgaaagc agcaggcccg ccgctcacat 3420
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catgattctc aatcctttgt tattttgtat tacaaaaagc tgaattatta tttcaaatat 3600
gggcaaatta gagccttcca tattgccaag gtgtatcaac cacactgata ycaygatctc 3660
tcttttgaat tagttttcca gttcacacct accatttatt tcatgattgg tttcagactt 3720
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gcagaaaact ggtgaactag aaaaggcctg tgtgggtcac gtggccaccc aacaccacag 4260
cagtgtctaa ggtatgcgtg ggagcctgca cagcaggagc ggggtcttct ggagacccgc 4320
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ggtgccagct tgaggatgct gggcaagtcc cgagccgtct gccttcctag taccacagtt 4440
accactgtct gttacctcgc gagttcaagt gcttcacgtg agacagctac gagacaggcc 4500
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cctggaaact ggaaaatgcy aagtaaatgt catgcacaat tgttgttcac attttatctc 4560
aatcactttt accaaatcag gctaaaccct gggtattcat aacgtcttgg gctgtacaaa 4620
ttgttccttg aaatgactca gagacatttt ctgaattggc ttccatcagc caagcatttc 4680
ttcagaactg gaaaaatgct ttaaatttgg ctttgtcatg attattaaaa cactctgtac 4740
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aaaaaaaaa                                                             4809
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<210> 570
<211> 951
<212> DNA
<213> Homo sapiens

<400> 570
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aaaattgaat attgagatac cattctttag tgttaccttt tttacccaca tgtgtttctg 60
aaaatattgg aattttattc atcttaaaaa ttggacccgg ccttatttac catctttaat 120
ccattttagt actatgggtg agtacatgga attgaagtct ggcttaaatc ttcagaaagt 180
tatatatcta ttttatttta tttttttgag acagagtctc gctgtgtcac ccaggctgga 240
gtgcggtgcc acaatcttgg ctcactgcaa ·cctctgagtc ccaggttcaa gcgatactca 300
tgcctcggcc tcctgagtag ctgggactac aggcgtgcac caccacatct ggctaatctt 360
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ccgcctgcct cccaaagtgc tgggattaca ggcatgagcc accgcacaca gctgggactg 480
ggtaatttat aaagaaaaga ggtttaatga ctcacagttc cgcatggctg gagaggcctc 540
aggaaactta caatcatggt ggaaggcgaa ggggaagcaa ggcacgtctt acatggtggc 600
aggagagaac gagtgagggg ggagactgcc acaaactttt ttttttttgag acaagagtct 660
ggccctgttg cccaggctgg agtgcagtgg catgatctca gctcactgca acctctgcct 720
cacaggttca agcaattctc atgcctcagc ctcccgcata gctgggacca caggtatgca 780
ccaccacacc tagctaattt ttgtagtttt agtagagatg gggtctcact atgttgctca 840
ggctggtcta aaactcctgg gctccagcaa tccgcctgcc ttggcctccc aaagtgctgg 900
ggttacaggc ataagccacc acatccagcc tgccacatac ttttaaacta t            951
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<210> 571
<211> 819
<212> DNA
<213> Homo sapiens

<400> 571
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ttattgcttt tgttgcaaat gccgtggctt catctgagga attctagaat tcagagggtg 180
tagccctcca ctctgctgtc ttgctatctg ctctcattgc atccgtttaa cctgcattct 240
gaaagatgtt tctcaggttt ttccttgacg attttcttct tttctgattc tgacaatgtt 300
ttaaatcatt gtactgtggt tatcatttct ctgcatttat tttacccatc ttcctttgta 360
acttgtccta ttgtctttta atttctgcct gttctttatg gctttcaact tcataaataa 420
catgttttct caaatctctt tgtgaattcc agagagggcc aggcacggtg gctcacatct 480
gtaatcccag cactttgggg aggctgagac gggtggatca cttgaggtca ggagtttgag 540
accagcctgg coaacatggt gaaatcccgt ttcactaaaa atacaaaaat tacccaggca 600
tggtggcggg cgcctgtaat cccaggtact cgggaggctg agggaggaga atcgcttgaa 660
cctgggaggc tgagggagga gaatcgcttg aacccgggag gcagaggttg cagtgaaccg 720
agatcatgtt gctgcactcc agcctggtca acagagcaag actctgcctc aaaaacaaac 780
aaataaacaa acaaacaaac aaaacagaga gattttgct                           819
```

<210> 572
<211> 203
<212> DNA
<213> Homo sapiens

<400> 572
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tatagaatac tcaagctatg catcaagctt ggtaccgagc tcggatccac tatttacggc 60
```

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cgccagtgtg ctggaattcg cccttagctc ggatccacta gtccagtgtg gtggaattcc 120
attgtgttgg gcccaacaca atggagccac cacatccagc ctgccacata cttttaaact 180
atcaggtctc atgagaactc atg                                          203
```

<210> 573
<211> 132
<212> PRT
<213> Homo sapiens

<400> 573
```
Met Val Glu Gly Glu Gly Glu Ala Arg His Val Leu His Gly Gly Arg
                5                  10                  15

Arg Glu Arg Val Arg Gly Glu Thr Ala Thr Asn Phe Phe Phe Leu Arg
            20                  25                  30

Gln Glu Ser Gly Pro Val Ala Gln Ala Gly Val Gln Trp His Asp Leu
        35                  40                  45

Ser Ser Leu Gln Pro Leu Pro His Arg Phe Lys Gln Phe Ser Cys Leu
    50                  55                  60

Ser Leu Pro His Ser Trp Asp His Arg Tyr Ala Pro Pro His Leu Ala
65                  70                  75                  80

Asn Phe Cys Ser Phe Ser Arg Asp Gly Val Ser Leu Cys Cys Ser Gly
                85                  90                  95

Trp Ser Lys Thr Pro Gly Leu Gln Gln Ser Ala Cys Leu Gly Leu Pro
            100                 105                 110

Lys Cys Trp Gly Tyr Arg His Lys Pro Pro His Pro Ala Cys His Ile
            115                 120                 125

Leu Leu Asn Tyr
        130
```

<210> 574
<211> 62
<212> PRT
<213> Homo sapiens

<400> 574
```
Met Thr His Ser Ser Ala Trp Leu Glu Arg Pro Gln Glu Thr Tyr Asn
                5                  10                  15

His Gly Gly Arg Arg Arg Gly Ser Lys Ala Arg Leu Thr Trp Trp Gln
            20                  25                  30

Glu Arg Thr Ser Glu Gly Gly Asp Cys His Lys Leu Phe Phe Phe Glu
        35                  40                  45

Thr Arg Val Trp Pro Cys Cys Pro Gly Trp Ser Ala Val Ala
    50                  55                  60
```

<210> 575

<211> 76
<212> PRT
<213> Homo sapiens

<400> 575
Met Val Lys Ser Arg Phe Thr Lys Asn Thr Lys Ile Thr Gln Ala Trp
                5   10   15

Trp Arg Ala Pro Val Ile Pro Gly Thr Arg Glu Ala Glu Gly Gly Glu
            20   25   30

Ser Leu Glu Pro Gly Arg Leu Arg Glu Glu Asn Arg Leu Asn Pro Gly
        35   40   45

Gly Arg Gly Cys Ser Glu Pro Arg Ser Cys Cys Cys Thr Pro Ala Trp
    50   55   60

Ser Thr Glu Gln Asp Ser Ala Ser Lys Thr Asn Lys
65   70   75

<210> 576
<211> 68
<212> PRT
<213> Homo sapiens

<220>
<221> VARIANT
<222> (1)...(68)
<223> Xaa = Any Amino Acid

<400> 576
Met Leu Gly Lys Ser Arg Ala Val Cys Leu Pro Ser Thr Thr Val Thr
                5   10   15

Thr Val Cys Tyr Leu Ala Ser Ser Ser Ala Ser Arg Glu Thr Ala Thr
            20   25   30

Arg Gln Ala Pro Gly Asn Trp Lys Met Xaa Ser Lys Cys His Ala Gln
        35   40   45

Leu Leu Phe Thr Phe Tyr Leu Asn His Phe Tyr Gln Ile Arg Leu Asn
    50   55   60

Pro Gly Tyr Ser
65

<210> 577
<211> 57
<212> PRT
<213> Homo sapiens

<400> 577
Met Tyr Leu Glu Asn Ser Phe Tyr Cys Gln Met Ile Leu Leu Lys Arg
                5   10   15

Cys Arg Leu Ser Lys Ile Ser Thr Gln Arg Val Val Pro Asp Gly Pro

```
                   20                    25                    30

    Pro Ala Pro Val Pro Gly Ser Phe Pro Met Phe Pro Arg Phe Gly Phe
             35                    40                    45

    Arg Leu Ala Pro Pro Ala Asp Thr Pro
         50                    55


    <210> 578
    <211> 51
    <212> PRT
    <213> Homo sapiens

    <400> 578
    Met Gln Leu Ile Tyr Leu Cys Phe Leu Gly Leu Leu Tyr Ile Arg His
                     5                    10                    15

    His Asp Ser Gln Ser Phe Val Ile Leu Tyr Tyr Lys Lys Leu Asn Tyr
                 20                    25                    30

    Tyr Phe Lys Tyr Gly Gln Ile Arg Ala Phe His Ile Ala Lys Val Tyr
             35                    40                    45

    Gln Pro His
         50


    <210> 579
    <211> 56
    <212> PRT
    <213> Homo sapiens

    <400> 579
    Met His Phe Thr Phe Met Gln Leu Ile Tyr Leu Cys Phe Leu Gly Leu
                     5                    10                    15

    Leu Tyr Ile Arg His His Asp Ser Gln Ser Phe Val Ile Leu Tyr Tyr
                 20                    25                    30

    Lys Lys Leu Asn Tyr Tyr Phe Lys Tyr Gly Gln Ile Arg Ala Phe His
             35                    40                    45

    Ile Ala Lys Val Tyr Gln Pro His
         50                    55


    <210> 580
    <211> 67
    <212> PRT
    <213> Homo sapiens

    <400> 580
    Met Glu Leu Arg Thr Lys Ala Leu Arg Thr Ala Gln Gln Leu Thr Ser
                     5                    10                    15

    Cys Val Thr Ala Leu Lys Ala Ala Gly Pro Pro Leu Thr Phe Trp Lys
                 20                    25                    30
```

```
Gly Lys Trp Val Gln Cys Cys Leu Pro Leu Trp Gly Leu Leu Gly Ser
        35                  40                  45

His Ala Phe Tyr Ile Tyr Ala Val Asp Ile Phe Met Phe Pro Gly Ser
    50                  55                  60

Phe Ile His
 65
```

```
<210> 581
<211> 77
<212> PRT
<213> Homo sapiens

<400> 581
Met Leu Glu Val Lys Phe Glu Val Ser Leu Arg Pro Thr Gly Asn Glu
                5                  10                  15

Thr Ala Gly Gln Thr His Gly Thr Gln Asp Lys Gly Ser Lys Asp Ser
            20                  25                  30

Thr Ala Ala Asp Ile Leu Cys Asp Ser Leu Glu Ser Ser Arg Pro Ala
        35                  40                  45

Ala His Ile Leu Glu Gly Lys Met Gly Thr Met Leu Ser Ala Thr Leu
    50                  55                  60

Gly Pro Ser Trp Val Thr Cys Ile Leu His Leu Cys Ser
 65                  70                  75
```

```
<210> 582
<211> 51
<212> PRT
<213> Homo sapiens

<400> 582
Met Leu Phe Leu Gln Thr Ile Asp Thr Lys Cys Thr Gly Ile Glu Ile
                5                  10                  15

Asn Arg Asn Trp Ser Lys Val Trp His Thr His Ser His Val Asp Val
            20                  25                  30

Lys Leu Cys Leu Glu Phe Leu Cys Gly Val Trp Phe Gly Leu Gly Phe
        35                  40                  45

Leu Gly Val
    50
```

```
<210> 583
<211> 60
<212> PRT
<213> Homo sapiens

<400> 583
```

```
Met Ser Thr Ser Asp Gly Phe Ala Pro Pro Pro Gln Leu Gly Ser Arg
                5                   10                  15

Cys Ser His Ile Arg Gly Pro Ile Lys Ile Ala Arg Asn Lys Phe Pro
            20                  25                  30

Arg Thr Leu Thr Ser Gln Glu Leu Arg Arg Phe Ala Glu Tyr Ser Gly
        35                  40                  45

Met Met Phe Gly Asp Gln Thr Thr Ala Gly Gln Lys
    50                  55                  60
```

<210> 584
<211> 76
<212> PRT
<213> Homo sapiens

<400> 584
```
Met Cys Leu Cys Ile Pro Leu Gly Gly Tyr Gln Glu Leu Cys His Cys
                5                   10                  15

Met Ser Thr Ser Asp Gly Phe Ala Pro Pro Pro Gln Leu Gly Ser Arg
            20                  25                  30

Cys Ser His Ile Arg Gly Pro Ile Lys Ile Ala Arg Asn Lys Phe Pro
        35                  40                  45

Arg Thr Leu Thr Ser Gln Glu Leu Arg Arg Phe Ala Glu Tyr Ser Gly
    50                  55                  60

Met Met Phe Gly Asp Gln Thr Thr Ala Gly Gln Lys
65                  70                  75
```

<210> 585
<211> 50
<212> PRT
<213> Homo sapiens

<400> 585
```
Met Val Tyr Arg Phe Gly Gln Met Ser Asp Asn Pro Phe Tyr Ile Leu
                5                   10                  15

Ala Ser Leu Gly Ser Ser Ser Cys Arg Asn Gly Leu Ala Ser Lys Trp
            20                  25                  30

Arg Gln Ala Asp Pro Ser Asp Gly Tyr Met Glu Pro Cys Phe Gln Leu
        35                  40                  45

Leu Phe
    50
```

<210> 586
<211> 60
<212> PRT
<213> Homo sapiens

<400> 586
Met Leu Val His Ile Tyr Ser Cys Cys Gly Met Val Tyr Arg Phe Gly
                5   10   15

Gln Met Ser Asp Asn Pro Phe Tyr Ile Leu Ala Ser Leu Gly Ser Ser
            20   25   30

Ser Cys Arg Asn Gly Leu Ala Ser Lys Trp Arg Gln Ala Asp Pro Ser
        35   40   45

Asp Gly Tyr Met Glu Pro Cys Phe Gln Leu Leu Phe
        50   55   60

<210> 587
<211> 1408
<212> DNA
<213> Homo sapiens

<400> 587
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cggctggaat tgctctggtt atgatgacag agaaaatgat ctcttcctct gtgacaccaa 180
cacctgtaaa tttgatgggg aatgtttaag aattggagac actgtgactt gcgtctgtca 240
gttcaagtgc aacaatgact atgtgcctgt gtgtggctcc aatggggaga gctaccagaa 300
tgagtgttac ctgcgacagg ctgcatgcaa acagcagagt gagatacttg tggtgtcaga 360
aggatcatgt gccacagatg caggatcagg atctggagat ggagtccatg aaggctctgg 420
agaaactagt caaaaggaga catccacctg tgatatttgc cagtttggtg cagaatgtga 480
cgaagatgcc gaggatgtct ggtgtgtgtg taatattgac tgttctcaaa ccaacttcaa 540
tcccctctgc gcttctgatg ggaaatctta tgataatgca tgccaaatca aagaagcatc 600
gtgtcagaaa caggagaaaa ttgaagtcat gtctttgggt cgatgtcaag ataacacaac 660
tacaactact aagtctgaag atgggcatta tgcaagaaca gattatgcag agaatgctaa 720
caaattagaa gaaagtgcca gagaacacca cataccttgt ccggaacatt acaatggctt 780
ctgcatgcat gggaagtgtg agcattctat caatatgcag gagccatctt gcaggtgtga 840
tgctggttat actggacaac actgtgaaaa aaaggactac agtgttctat acgttgttcc 900
cggtcctgta cgatttcagt atgtcttaat cgcagctgtg attggaacaa ttcagattgc 960
tgtcatctgt gtggtggtcc tctgcatcac aaggaaatgc cccagaagca acagaattca 1020
cagacagaag caaaatacag ggcactacag ttcagacaat acaacaagag cgtccacgag 1080
gttaatctaa agggagcatg tttcacagtg gctggactac cgagagcttg gactacacaa 1140
tacagtatta tagacaaaag aataagacaa gagatctaca catgttgcct tgcatttgtg 1200
gtaatctaca ccaatgaaaa catgtactac agctatattt gattatgtat ggatatattt 1260
gaaatagtat acattgtctt gatgttttt ctgtaatgta aataaactat ttatatcaca 1320
caatawagtt ttttctttcc catgtatttg ttatatataa taaatactca gtgatgagaa 1380
aaaaaaaaaa aaaaaaaaaa rwmgaccc   1408

<210> 588
<211> 81
<212> PRT
<213> Homo sapiens

<400> 588
Met Pro Gln Lys Gln Gln Asn Ser Gln Thr Glu Ala Lys Tyr Arg Ala
                5   10   15

Leu Gln Phe Arg Gln Tyr Asn Lys Ser Val His Glu Val Asn Leu Lys
            20   25   30

```
Gly Ala Cys Phe Thr Val Ala Gly Leu Pro Arg Ala Trp Thr Thr Gln
        35                  40                  45
```

```
Tyr Ser Ile Ile Asp Lys Arg Ile Arg Gln Glu Ile Tyr Thr Cys Cys
        50                  55                  60
```

```
Leu Ala Phe Val Val Ile Tyr Thr Asn Glu Asn Met Tyr Tyr Ser Tyr
    65                  70                  75                  80
```

```
Ile
```

<210> 589
<211> 157
<212> PRT
<213> Homo sapiens

<400> 589
```
Met Thr Met Cys Leu Cys Val Ala Pro Met Gly Arg Ala Thr Arg Met
                5                  10                  15
```

```
Ser Val Thr Cys Asp Arg Leu His Ala Asn Ser Arg Val Arg Tyr Leu
            20                  25                  30
```

```
Trp Cys Gln Lys Asp His Val Pro Gln Met Gln Asp Gln Asp Leu Glu
        35                  40                  45
```

```
Met Glu Ser Met Lys Ala Leu Glu Lys Leu Val Lys Arg Arg His Pro
    50                  55                  60
```

```
Pro Val Ile Phe Ala Ser Leu Val Gln Asn Val Thr Lys Met Pro Arg
65                  70                  75                  80
```

```
Met Ser Gly Val Cys Val Ile Leu Thr Val Leu Lys Pro Thr Ser Ile
                85                  90                  95
```

```
Pro Ser Ala Leu Leu Met Gly Asn Leu Met Ile Met His Ala Lys Ser
            100                 105                 110
```

```
Lys Lys His Arg Val Arg Asn Arg Arg Lys Leu Lys Ser Cys Leu Trp
        115                 120                 125
```

```
Val Asp Val Lys Ile Thr Gln Leu Gln Leu Leu Ser Leu Lys Met Gly
    130                 135                 140
```

```
Ile Met Gln Glu Gln Ile Met Gln Arg Met Leu Thr Asn
145                 150                 155
```

<210> 590
<211> 347
<212> PRT
<213> Homo sapiens

<400> 590
```
Met Leu Leu Ile Val Ala Arg Pro Val Lys Leu Ala Ala Phe Pro Thr
                5                  10                  15
```

```
Ser Leu Ser Asp Cys Gln Thr Pro Thr Gly Trp Asn Cys Ser Gly Tyr
        20                  25                  30

Asp Asp Arg Glu Asn Asp Leu Phe Leu Cys Asp Thr Asn Thr Cys Lys
        35                  40                  45

Phe Asp Gly Glu Cys Leu Arg Ile Gly Asp Thr Val Thr Cys Val Cys
    50                  55                  60

Gln Phe Lys Cys Asn Asn Asp Tyr Val Pro Val Cys Gly Ser Asn Gly
65                  70                  75                  80

Glu Ser Tyr Gln Asn Glu Cys Tyr Leu Arg Gln Ala Ala Cys Lys Gln
            85                  90                  95

Gln Ser Glu Ile Leu Val Val Ser Glu Gly Ser Cys Ala Thr Asp Ala
            100                 105                 110

Gly Ser Gly Ser Gly Asp Gly Val His Glu Gly Ser Gly Glu Thr Ser
        115                 120                 125

Gln Lys Glu Thr Ser Thr Cys Asp Ile Cys Gln Phe Gly Ala Glu Cys
    130                 135                 140

Asp Glu Asp Ala Glu Asp Val Trp Cys Val Cys Asn Ile Asp Cys Ser
145                 150                 155                 160

Gln Thr Asn Phe Asn Pro Leu Cys Ala Ser Asp Gly Lys Ser Tyr Asp
                165                 170                 175

Asn Ala Cys Gln Ile Lys Glu Ala Ser Cys Gln Lys Gln Glu Lys Ile
            180                 185                 190

Glu Val Met Ser Leu Gly Arg Cys Gln Asp Asn Thr Thr Thr Thr Thr
        195                 200                 205

Lys Ser Glu Asp Gly His Tyr Ala Arg Thr Asp Tyr Ala Glu Asn Ala
    210                 215                 220

Asn Lys Leu Glu Glu Ser Ala Arg Glu His His Ile Pro Cys Pro Glu
225                 230                 235                 240

His Tyr Asn Gly Phe Cys Met His Gly Lys Cys Glu His Ser Ile Asn
                245                 250                 255

Met Gln Glu Pro Ser Cys Arg Cys Asp Ala Gly Tyr Thr Gly Gln His
            260                 265                 270

Cys Glu Lys Lys Asp Tyr Ser Val Leu Tyr Val Val Pro Gly Pro Val
        275                 280                 285

Arg Phe Gln Tyr Val Leu Ile Ala Ala Val Ile Gly Thr Ile Gln Ile
    290                 295                 300

Ala Val Ile Cys Val Val Val Leu Cys Ile Thr Arg Lys Cys Pro Arg
305                 310                 315                 320
```

Ser Asn Arg Ile His Arg Gln Lys Gln Asn Thr Gly His Tyr Ser Ser
              325   330   335

Asp Asn Thr Thr Arg Ala Ser Thr Arg Leu Ile
          340   345

<210> 591
<211> 565
<212> DNA
<213> Homo sapien

<400> 591
actaaagcaa atgaacaagc tgacttgcta gtatcatctg cattcattga agcacaagaa   60
cttcatgcct tgactcatgt aaatgcaata ggattaaaaa ataaatttga tatcacatgg   120
aaacagacaa aaaatattgt acaacattgc acccagtgtc agattctaca cctggccact   180
caggaagcaa gagttaatcc cagaggtcta tgtcctaatg tgttatggca aatggatgtc   240
atgcacgtac cttcatttgg aaaattgtca tttgtccatg tgacagttga tacttattca   300
catttcatat gggcaacctg ccagacagga gaaagtactt cccatgttaa aagacattta   360
ttatcttgtt ttcctgtcat gggagttcca gaaaaagtta aaacagacaa tgggccaggt   420
tactgtagta aagcatttca aaaattctta aatcagtgga aaattacaca tacaatagga   480
attctctata attcccaagg acaggccata attgaaggaa ctaatagaac actcaaagct   540
caattggtta aacaaaaaaa aaaaa   565

<210> 592
<211> 188
<212> PRT
<213> Homo sapien

<400> 592
Thr Lys Ala Asn Glu Gln Ala Asp Leu Leu Val Ser Ser Ala Phe Ile
 1   5   10   15
Glu Ala Gln Glu Leu His Ala Leu Thr His Val Asn Ala Ile Gly Leu
            20   25   30
Lys Asn Lys Phe Asp Ile Thr Trp Lys Gln Thr Lys Asn Ile Val Gln
         35   40   45
His Cys Thr Gln Cys Gln Ile Leu His Leu Ala Thr Gln Glu Ala Arg
      50   55   60
Val Asn Pro Arg Gly Leu Cys Pro Asn Val Leu Trp Gln Met Asp Val
65   70   75   80
Met His Val Pro Ser Phe Gly Lys Leu Ser Phe Val His Val Thr Val
             85   90   95
Asp Thr Tyr Ser His Phe Ile Trp Ala Thr Cys Gln Thr Gly Glu Ser
          100   105   110
Thr Ser His Val Lys Arg His Leu Leu Ser Cys Phe Pro Val Met Gly
      115   120   125
Val Pro Glu Lys Val Lys Thr Asp Asn Gly Pro Gly Tyr Cys Ser Lys
   130   135   140
Ala Phe Gln Lys Phe Leu Asn Gln Trp Lys Ile Thr His Thr Ile Gly
145   150   155   160
Ile Leu Tyr Asn Ser Gln Gly Gln Ala Ile Ile Glu Gly Thr Asn Arg
                165   170   175
Thr Leu Lys Ala Gln Leu Val Lys Gln Lys Lys Lys
             180   185

<210> 593
<211> 271

```
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(271)
<223> n = A,T,C or G

<400> 593
actttatgtt cnagtgcana aanccncctg gattgccacc ntactctcag ggctgtgant      60
tgtgcnccca nagcaacctg ggcacgcggg gacagggggg ccnacaattg agggagcggt     120
gtccctagct ggggtctata catgncnggg naagggcngc tgagtnccat nagcaaagga     180
nctagnatnt gcggggggtgc ggcctgggcc taccctttna agcatccntn gatccactcc    240
angaanccng gggtagncag gtttnccaac a                                    271

<210> 594
<211> 376
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(376)
<223> n = A,T,C or G

<400> 594
cctttggggg nggggggaac ctttaccatt gtnccccttt atttcatttg gttngggttc      60
gcgccctcnn gggccaacaa agttatcgtn nttgaagaga anattttttt ggnttngncc     120
cgattaagcg ncaaatgtgt agcaaaangc cgtgccactt gtggcgtagc tncgtcgggt     180
cgattcgacg acaaggcgtn gcgcgntanc gttagtctcn aatngacccn gtggcatgag     240
cccacgangg nttcgtgtcg tcacatggnc tctagacata acgcncnccn ttttttncag     300
aggggggntgc cgcccttagg gaggnagggg tggggacact agccaancca nantctnacc    360
ccattgaaga aaaggn                                                     376

<210> 595
<211> 242
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(242)
<223> n = A,T,C or G

<400> 595
agnctgctgn tcgtnccctn tatgtggctt catnntgagg acaanagtng cactgaggct      60
tgngnatgcc aggcaaggnc aagctggctc aaaaagcatc cacccacctc tgnaangggt     120
atgccangag cangtgcacc agtcccaact angagncccn ggcatgntac atcttcttcc     180
acccctnaaa ntttgngcta caangnccat ttttcttttt ctcttaaggg ncncntggct     240
tc                                                                   242

<210> 596
<211> 535
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
```

```
<222> (1)...(535)
<223> n = A,T,C or G

<400> 596
accagttgga tactgctaaa nagatattta tgcagcctca tatgttaagt cgtatatttt        60
gaaagctttt taaatttttt ctttaagaag attttagatg cttatcactg agtaccagag       120
ggatgtaggc tgatgccctt atcaacaaag tcagggactg tggcacacaa ggattgacta       180
ctgcagacac ggccacaatg ctacctctag agggcctgaa tccccctgcc ctctctggtg       240
gggagaaggg ctggcagagc cattagcatg ggctccggcc aatcctggcc actttgacac       300
tcctggtgct gacccagggt cctggaggaa gggatgaggt gggcagtaga gatgctcagg       360
gcagtggccc ctttccatcc acactggaac tatttcagta ttttaccacc aattcagcca       420
ttcccttgtg cgctggctga acatcagccc tgctccaggt ctcagtttcc cctttgtaaa      .480
gggaaagctc tggattcagg gagtgatgaa gaggtcatca tggtcttgag aattc           535


<210> 597
<211> 257
<212> DNA
<213> Homo sapien


<220>
<221> misc_feature
<222> (1)...(257)
<223> n = A,T,C or G


<400> 597
tttcnatacc caaaantacc ccatattang accanacatt tgtctnggaa aaattaccat        60
tntntaacnt ttgggccacc tgagannaaa tgggtgtaat ncatgataag atggancagn       120
attnctctta agatnngatn agaccccgtt tttcacggaa catatccaag nacccaatag       180
gnaacaagcc acgggnggag tcacaaacat atattcttta ctctcataat ccgtnncaca       240
naactnttgn acttgac                                                     257


<210> 598
<211> 222
<212> DNA
<213> Homo sapien


<220>
<221> misc_feature
<222> (1)...(222)
<223> n = A,T,C or G


<400> 598
nntggntacc gtcnaaactt nncttggtac ccgagctcgg atccactagt ccagtgtggt        60
ggaattccat tgtgttgggc tataagctgt aatagtggag ncgtgctngg ttcattgcan       120
nagnccctcc gcanncacnc ttgnnacaac ctgtgagnag gcnataaatt attcacataa       180
tcatcactgc atgaanctga ctcaaacgca tccacntaca cc                         222


<210> 599
<211> 238
<212> DNA
<213> Homo sapien


<220>
<221> misc_feature
<222> (1)...(238)
<223> n = A,T,C or G


<400> 599
```

```
gcatgacatc ancgatgtnt ttggnnacct ganattngct aaaactngng natgccgggn        60
atgnaggttt ggtantgatc tatgcactca catctcatgg ggacgtttca tgtggagtgn       120
tcgacaangt tgctgnancn gagaagtgat gatctcagtt gaaagggtca tgtgaataca       180
cnttacactt gaaaaagaag cacattggga atatcacgaa acgnccacca acatcctg         238
```

<210> 600
<211> 232
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(232)
<223> n = A,T,C or G

<400> 600
```
cgaactattt agactaccta ggaaaattat tttagtatca gaagaatatc aggggtgtag        60
tactcatcag agctaaatga gagcgcttta aaaatgttag tttgtcttcc gccatttcta       120
cagaaagctg caatttcagg ttttcaacct aataggtgat atttaanaaa aaaaaaaagc       180
aatcgcaaat agccccactg cttttacaaa tcattttttc cccaacacaa tg              232
```

<210> 601
<211> 547
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(547)
<223> n = A,T,C or G

<400> 601
```
cattgtgttg gggaaaaaat gatttgtata agcagtgggg ctatttgcga ttgctttttt        60
ttttcttaa atatcaccta ttaggttgaa aacctgaaat tgcagctttc tgtagaaatg       120
gcggaagaca aactaacatt tttaaagcgc tctcatttag ctctgatgag tactacaccc       180
ctnatattct tctgatacta aaataatttt cctagtgtag tctaaacttt tttaaaaaga       240
catgtaatcc gcggagttag taactcaaaa cgagtgcatc tnggaagtat cgcagccgtt       300
nctggatnaa attcccagct tgctngcttg ctnagccggg gggcggtnaa aaaaacatct       360
gcagcccngg ggnaaaaacc ttcgcattgt tcttacgtgt ttacgttatt ttatttccct       420
nnagcaaggc nggganttgg ggactcgaaa tggtacagtt gggctgggga tcgcccttgt       480
tacataaaag ncgtccagaa gagggacggt tacaggcngg ganctccaaa ggtcagtccc       540
tgccatt                                                                 547
```

<210> 602
<211> 826
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(826)
<223> n = A,T,C or G

<400> 602
```
cggggggnnt tacgtctctc tggacgcttt tattgtacca gggcgatccc agcccaactg        60
taccattcga gtccctactc ctgccttgct ctaggaaat aaaataacgt aaacacgtaa        120
gaacaatgcg aaagcgtttt cttccctagg ctgcagattg tcttcttcac cgcccctgct       180
tagctagcta gctagctggg aatttaatcc agaaacggct tgcgatacct cctagatgca       240
```

```
ctcgttttga gttacaaact ccgcggatta catgtctttt taaaaaagtt tagactacac      300
tagggaaaat tattttagta tcagaagaat atcaggggggt gtagtactca tcagagctna      360
atgagagcgc tttaaaaatg ttagtttgtc ttccgccatt tctacagaaa gctgcaattt      420
caggttttca ncctaatagg tgatatntaa gaaaaaaaaa acaatcgcan atagcccact      480
gcttttacaa atcattttc tcttctaggt atagcctgtc aggtggccta atgtattttt      540
gacatctcta ggaattttaa tagaccagaa atgggtgcca gagatatgcc tgcactaatc      600
ttaagtgggg atttatgtat ttctcaanca agtgattaaa gcaaaactag gcacgaatga      660
aatcaagatc tttaggccag aaatcatgaa nantttttana attattttan gaatctgtgg      720
cttctcttct taaaatngaa aaaaaaattg tttaaaccca naaggtctga atacccaagc      780
ncccctgaacn anagaacaan gccggagcac ccctcccaa atcccc                    826
```

\<210\> 603
\<211\> 817
\<212\> DNA
\<213\> Homo sapien

\<220\>
\<221\> misc_feature
\<222\> (1)...(817)
\<223\> n = A,T,C or G

\<400\> 603
```
nnangacttt tgtggtntta tacaattntt ttttctattt ctatgaagag aaagccacag       60
agtcctaaaa taattctaaa actcatcatg actttcttgc ctaaaagatc ttgatttcaa      120
tcgtgcctag ttttgcttta atcacttgct tgagaaatac ataaatcccc acttaagatt      180
agtgcaggca tatctctggc acccatttct ggttctatta aaattcctag agatgtcaaa      240
aattacatta ggccacctga caggctatac ctagaagaga aaaaatgatt tgtaaaagca      300
gtggggctat ttgcgattgc ttttttttttt tcttaaatat cacctattag gttgaaaacc      360
tgaaattgca gctttctgta gaaatggcgg aagacaaact aacattttta aagcgctctc      420
atttagctct gatgagtact acacccctga tattcttctg atactaaaat aatttttccta      480
gtgtagtcta aacttttta aaaagacatg taatccgcgg agtttgtaac tcaaaacgag      540
tgcatctagg aggtatcgca agccgtttct ggattaaatt cccagctagc ttgcttgctt      600
agcaggggcg ggnaaanaag acatctgcag cctagggaag aaaacctttc gcattgttct      660
tacgtgttta cgttatttta tttcctanaa caaggcngaa ttgggactcg aatggttcag      720
ttggggtggg ggatccccctg gtncataaaa ngtcanaaag anggtacagg cggaacncca      780
agggtcgtcc tgcatttana ctcggaattt tggtgcc                              817
```

\<210\> 604
\<211\> 694
\<212\> DNA
\<213\> Homo sapien

\<220\>
\<221\> misc_feature
\<222\> (1)...(694)
\<223\> n = A,T,C or G

\<400\> 604
```
cttttcaaat cattttttnct cttctaggta tancctgtca ggtggcctaa tgtaattttt       60
gacatctcta ngaatttttaa tagaaccaga aatgggtgcc agagatatgc ctgcactaat      120
cttaagtggg gatttatgta tttctcaagc aagtgattaa agcaaaacta ggcacgattg      180
aaatcaagat cttttaggca anaaagtcat gatgagtttt agaattatttt taggactctg      240
tggctttctc ttcatagaaa tagaaaaaaa aattgtataa aaccacaaaa ggtcctgaat      300
agccaaagca acactganca aaaagaacan agcagggaag caacacacta ccngaattca      360
aattatacta ccagggtgta gtaaccaaaa cagcattcta ttggcataaa atagacacca      420
agaccaatgg ancagaataa agaaccccac aaataaatcc atatatntac cgccanctga      480
ttatcaataa cnaacaccaa gaacatatnt taaggacnt nctattcaat aantagtgct      540
ggnaaaaact gggaaatcca tatgcagaaa naatgaaact agaccccctat ccctcaccat      600
```

```
acgcaaannt caacttcgga atgggattac aaaacttaag acattccaac ccaagaaact     660
atnaaancta ctattaagaa aacagatcnc nccc                                 694
```

<210> 605
<211> 678
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(678)
<223> n = A,T,C or G

<400> 605
```
taaaaatcta gactacacta ggaaattatt ttantatcag aagaatatca ggggtgtagt     60
actcatcana gctaaatgag agcgctttaa aaatgttagt ttgtcttccg ccatttctac    120
agaaagctgc aatttcaggt tttcaaccta ataggtgata tttaagaaaa aaaaaaagca    180
atcgcaaata gccccactgc ttttacaaat catttttct cttctaggta tagcctgtca     240
ggtggcctaa tgtaattttt gacatctcta ggaattttaa tagaaccaga aatgggtgcc    300
agagatatgc ctgcactaat cttaagtggg gatttatgta tttctcaagc aagtgattaa    360
agcaaaacta ggcacgattg aaatcaaanat cttttaggca agaaagtcat gatgagtttt   420
anaattattt taggactctg tggctttctc ttcatagaaa tagaaaaaaa aaattgtata    480
aaaaccacaa aaggtcctga atagcccaaa gcaacactga acaaaangaa caaagcagga    540
agcaacacac taccggaatt caattatact accaaggtgt antaaccaaa acagcattct    600
attgggcata aaatagacca aagaccagtg ggaaacagaa taaagaancc caaaataaat    660
cctatattta cngcccnc                                                   678
```

<210> 606
<211> 263
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(263)
<223> n = A,T,C or G

<400> 606
```
gtggggtcng cancagccaa ctcagcttcc tttcgggctt tgttagcaga cggatcatcc     60
tctagtccac tgtgntcaaa ttccattgtg tggggggccnc tcgcctcggc canagatctg    120
agtgancana cntgtcccca ctgaggtgcc ccacagcngn ttgtnttcag cangggctna    180
caactcgacc ggcagcgnan ggctggcaga antgngcgcc tnnctcattc ctacgcngtn    240
ngccgcagga aggangacag gcc                                             263
```

<210> 607
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 607
```
ccatgtgggt cccggttgtc tt                                               22
```

<210> 608
<211> 22
<212> DNA

<213> Artificial Sequence

<220>
<223> Primer

<400> 608
gatagggtg ctcaggggtt gg   22

<210> 609
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 609
gctggacagg gggcaaaagc tggggcagtg aaccatgtgc   40

<210> 610
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 610
ccttgtccag atagcccagt agctgac   27

<210> 611
<211> 46
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 611
gatagagaaa accgtccagg ccagtattgt gggaggctgg gagtgc   46

<210> 612
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 612
gcacatggtt cactgcccca gcttttgccc cctgtccagc   40

<210> 613
<211> 38
<212> DNA
<213> Artificial Sequence

<220>

```
<223> Primer

<400> 613
gccgctcgag ttagaattcg gggttggcca cgatggtg                      38

<210> 614
<211> 53
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 614
cggcgggcat atgcatcacc atcaccatca catcataaac ggcgaggact gca       53

<210> 615
<211> 46
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 615
gcactcccag cctcccacaa tactggcctg gacggttttc tctatc              46

<210> 616
<211> 1350
<212> DNA
<213> Homo sapien

<400> 616
atgcatcacc atcaccatca catcataaac ggcgaggact gcagcccgca ctcgcagccc   60
tggcaggcgg cactggtcat ggaaaacgaa ttgttctgct cgggcgtcct ggtgcatccg  120
cagtgggtgc tgtcagccgc acactgtttc cagaactcct acaccatcgg gctgggcctg  180
cacagtcttg aggccgacca agagccaggg agccagatgg tggaggccag cctctccgta  240
cggcacccag agtacaacag acccttgctc gctaacgacc tcatgctcat caagttggac  300
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gcggggaact cttgcctcgt ttctggctgg ggtctgctgg cgaacggcag aatgcctacc  420
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Cys Ser Gly Val Leu Val His Pro Gln Trp Val Leu Ser Ala Ala His
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Cys Phe Gln Asn Ser Tyr Thr Ile Gly Leu Gly Leu His Ser Leu Glu
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Arg His Pro Glu Tyr Asn Arg Pro Leu Leu Ala Asn Asp Leu Met Leu
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Ile Lys Leu Asp Glu Ser Val Ser Glu Ser Asp Thr Ile Arg Ser Ile
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Ser Ile Ala Ser Gln Cys Pro Thr Ala Gly Asn Ser Cys Leu Val Ser
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Gly Trp Gly Leu Leu Ala Asn Gly Arg Met Pro Thr Val Leu Gln Cys
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Val Asn Val Ser Val Val Ser Glu Glu Val Cys Ser Lys Leu Tyr Asp
145                 150                 155                 160
Pro Leu Tyr His Pro Ser Met Phe Cys Ala Gly Gly Gly Gln Asp Gln
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Lys Asp Ser Cys Asn Gly Asp Ser Gly Gly Pro Leu Ile Cys Asn Gly
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Tyr Leu Gln Gly Leu Val Ser Phe Gly Lys Ala Pro Cys Gly Gln Val
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Gly Val Pro Gly Val Tyr Thr Asn Leu Cys Lys Phe Thr Glu Trp Ile
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Glu Lys Thr Val Gln Ala Ser Ile Val Gly Gly Trp Glu Cys Glu Lys
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His Ser Gln Pro Trp Gln Val Leu Val Ala Ser Arg Gly Arg Ala Val
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Cys Gly Gly Val Leu Val His Pro Gln Trp Val Leu Thr Ala Ala His
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Cys Ile Arg Asn Lys Ser Val Ile Leu Leu Gly Arg His Ser Leu Phe
            275                 280                 285
His Pro Glu Asp Thr Gly Gln Val Phe Gln Val Ser His Ser Phe Pro
    290                 295                 300
His Pro Leu Tyr Asp Met Ser Leu Leu Lys Asn Arg Phe Leu Arg Pro
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Gly Asp Asp Ser Ser His Asp Leu Met Leu Leu Arg Leu Ser Glu Pro
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Ala Glu Leu Thr Asp Ala Val Lys Val Met Asp Leu Pro Thr Gln Glu
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Ser Glu Pro Cys Ala Leu Pro Glu Arg Pro Ser Leu Tyr Thr Lys Val
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